A **UNIVERSITY'S** GUIDE TO

MARKET RESEARCH

Three key data types for assessing the viability of new programs

emsi

a 2015 guidebook

Summary

Two common scenarios drive the need for data about new academic programs:

*1) **The need to justify the feasibility of a program that an institution already has in mind***
*2) **A strategic question about what new opportunities may exist in a particular market***

Data can facilitate both of these processes by helping your institution assess the need for a particular program, gauge student interest, learn how to differentiate course offerings from competitor programs, evaluate economic sustainability, and prepare a credible argument for the allocation of resources.

This analysis is particularly key for online program development, which arguably has greater competition than place-based programs. Due to their largely nontraditional student base, online programs are also more often geared toward improving career outcomes for students, making data even more critical to the development of course offerings.

Topics & Questions

Introduction & Purpose

New academic programs yield innovation. They keep institutions relevant and competitive. They enliven campus culture, offer fresh perspectives and expertise, and push beyond the limits of your current course catalog to include what students really want to know and what employers need.

So it's exciting to start a new academic program—especially for the faculty and staff members who are tasked with qualifying a new idea or exploring options in a particular market.

But new programs are inherently risky. Even an online program requires additional investment in personnel and marketing and outreach resources, among other costs. If the program is unlikely to produce enough revenue to cover those budgetary costs, the program is probably not sustainable.

That's why many universities and colleges have market research processes in place prior to bringing new programs to leadership for approval. This guidebook will help staff and faculty members through that process by outlining the information to look for and exactly where you can find it.

What Do You Need to Know?

Before taking your proposal to your leadership, there are several questions you need to answer.

Is there a need for more graduates with the skills and knowledge that will be earned in this program? Is that need concentrated in your state or region? Would this program be more successful online or on campus? How can you gauge prospective student interest? How can your institution differentiate its course offerings and stand out from competitors? How should you market your program?

The answers to these questions (informed by labor market and education data) will help you stay competitive, drive enrollment, and prepare your best-possible proposal.

1 Finding What You Need in Degree Completion Data

Education Data

The Integrated Postsecondary Education Data System (IPEDS) is one of the most useful data sources available to universities and colleges when evaluating new program potential. Developed by the US Department of Education's National Center for Education Statistics, IPEDS collects data from every college, university, and technical and vocational institution that participates in federal student financial aid programs.

IPEDS data is organized into a taxonomy called the Classification of Instructional Programs (CIP) system. The CIP system tracks and reports on fields of study and completions activity.

This data has a variety of uses for market research, primarily in terms of assessing the competitor landscape:

- **View nearby, competitor, and online program completion data to determine whether or not there is a strong demand for a specific program.**

- **Identify competitor programs, then research them further in order to determine how you can differentiate yours.**

- **Learn how you might tweak your program name and course offerings, if a similar program or emphasis is more (or too) popular.**

This information is extraordinarily valuable. In order to measure potential interest, improve upon your marketing strategies, and differentiate your program offerings, you have to know your competition.

But because IPEDS is so comprehensive, it can be bewildering and difficult to navigate. CIP classifications do not necessarily match up with the exact names of majors, so even finding your institution's own completers might be difficult. How can you make sense of it?
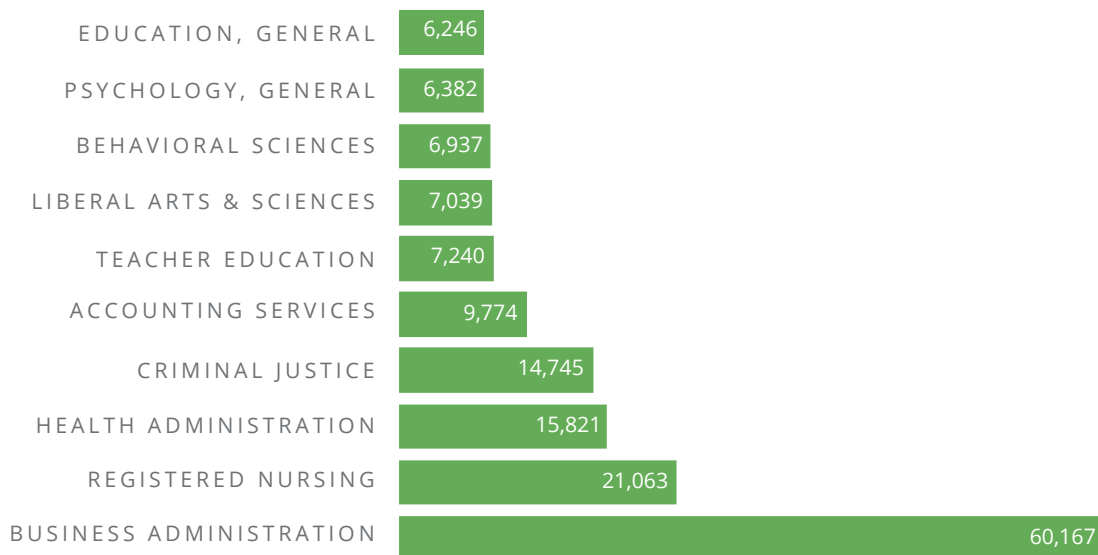
One method is to try different detail levels. If you can't find what you're looking for at a more detailed level, you'll often be able to find it with a broader view—and vice versa. The CIP taxonomy is organized on three levels:

1) **The two-digit series: general groupings of related programs**

2) **The four-digit series: intermediate groupings of programs that have comparable content and objectives**

3) **The six-digit series: specific instructional programs**

IPEDS can also tell you if a specific institution offers a similar program. You can compare prices, enrollment, financial aid, student success, and finances. You can even see if it offers an online option for that program (this is one way to estimate online program popularity).

Unfortunately, IPEDS only distinguishes between online and residential program

TOP 10 DISTANCE LEARNING PROGRAMS IN 2013, DESCRIPTION & COMPLETION COUNT

Program	Completion Count
EDUCATION, GENERAL	6,246
PSYCHOLOGY, GENERAL	6,382
BEHAVIORAL SCIENCES	6,937
LIBERAL ARTS & SCIENCES	7,039
TEACHER EDUCATION	7,240
ACCOUNTING SERVICES	9,774
CRIMINAL JUSTICE	14,745
HEALTH ADMINISTRATION	15,821
REGISTERED NURSING	21,063
BUSINESS ADMINISTRATION	60,167

Source: National Center for Education Statistics (IPEDS)
Institutions Where At Least 80% Of Enrollments Are Online (These Institutions Account For 37% Of All Online Enrollments). All Degree Levels.

counts; degree completion information is reported in aggregate. But there is a trick for getting a sense of how many students are graduating with online degrees in a certain discipline. To do this, analyze completions data for traditionally online universities (such as Capella University, Liberty University, Arizona State University-Skysong, etc.). By viewing these schools' degrees and completions, you can estimate interest, popularity, and need.

How else can IPEDS data be used for market research? With this information, you can easily see whether or not your institution can compete with other programs in terms of tuition rates, scholarship offerings, etc. For example, if the degree program you want to start is popular but the average price of the program is higher than your institution would charge, the program may still be a worthwhile opportunity for you.

Weaknesses

- IPEDS is not comprehensive of all education and training programs (e.g., MakerSquare and other non-traditional education and training programs are not included in this data).
- There is about one-year lag between when IPEDS collects its data and when the data is released.
- Institutions self-report their information to IPEDS, so the possibility of error exists, particularly in regard to the reported program of study.
- Online and residential programs are reported in aggregate, so it can be difficult to estimate online program popularity.
- The CIP taxonomy is not intuitively organized; similar programs may not be found within the same six-, four-, or even two-digit series.

Example

Let's say that a university in Washington State is interested in starting an online bachelor's program for graphic design. Program evaluators may want to start their analysis with a broad CIP category, such as the four-digit CIP code design and applied arts (50.04) and then dive deeper into detail with graphic design (50.0409).
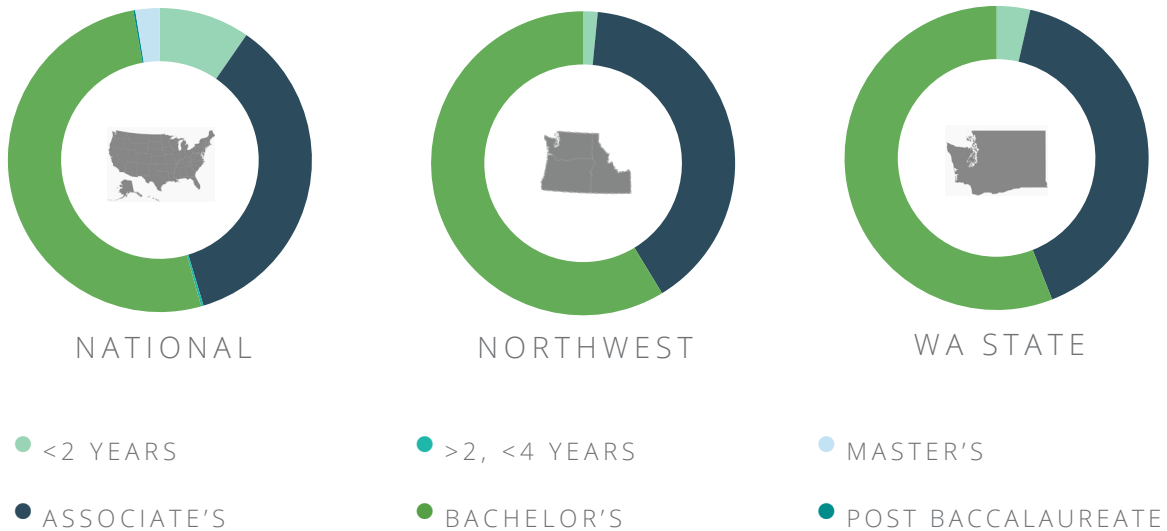
But it's also common for there to be additional, related CIP codes that may inform your analysis, especially at the greatest detail levels. For example, you might want to also check out design and visual communications, general (50.0501), which would have been captured by your four-digit analysis. However, there may be relevant programs that aren't immediately visible even at a broader view, such as web page, digital/multimedia and information resources design (11.0801). Finding these pertinent CIP codes that are not included in the same broad category is one of the greatest difficulties of using IPEDS data.

At the national level, there were just over 12,000 completions for graphic design programs in 2013, including online and residential programs of any postsecondary degree level (see table). But the state of Washington produced only 84 completions that year, 56% of which were bachelor's degree programs. If you add in Washington's neighboring states, Idaho and Oregon, the number of completers jumps to just 259, which is still a low share of the national total.

And since associate's degrees are popular for this field, it's likely that there are portions of professionals working without a bachelor's who may be interested in attaining one in order to advance their careers—an excellent market for online programs. (To get an idea of the typical education level for a given occupation, visit the BLS Employment Projections webpage on education and training data; in the case of graphic designers, the typical education level is a bachelor's degree.)

But does Washington really need more graphic designers than it is already producing? Simply put: If you create this program, are your graduates likely to find jobs?

DEGREE LEVEL DISTRIBUTION AMONG
GRAPHIC DESIGN PROGRAMS, 2013

NATIONAL   NORTHWEST   WA STATE

● <2 YEARS   ● >2, <4 YEARS   ● MASTER'S

● ASSOCIATE'S   ● BACHELOR'S   ● POST BACCALAUREATE

Source: EMSI 2015.1 dataset

2

Evaluating Program Viability With Labor Market Data

Occupation Data

Once you've determined that similar programs are producing enough completers to indicate student interest, it's important to look at labor market data to evaluate whether or not those programs are producing more completers than there are jobs.

If that's the case, then interest in the program could very well decline. (This is especially true for fields in science, technology, engineering, and mathematics (STEM) and health care, which are more closely allied with career pathways than the humanities and social sciences.) If the program trains for a specific occupation or set of occupations, you'll want to analyze those occupations for wage potential, job counts, and growth.

This information can be largely accessed via Occupational Employment Statistics (OES), a program that is managed by the Bureau of Labor Statistics (BLS) and produces employment and wage estimates annually for over 800 occupations. Similar to IPEDS, OES data is available at different detail levels, ranging from two-digit to six-digit and organized in a taxonomy called the Standard Occupation Classification (SOC). These estimates are available for the nation as a whole, for individual states, and for metropolitan and nonmetropolitan areas.

You can adapt your search criteria based on the target audience for the particular online program, but the national, regional, and state level might be the best places to start—unless your pool of prospective students is largely local. However, you'll find that it is much easier to search an individual dataset than to capture historical trends (which is unfortunate because trends provide valuable context that could inform whether or not your new program will be sustainable over time).

National occupational estimates for specific industries (also known as staffing patterns) are also available, although the "Create Customized Tables" function (which you have to use to build a full staffing pattern list) is difficult to use, largely because you have to scroll through hundreds of occupations to find the one you are looking for. Nonetheless, this information is important to your research; it will help you better analyze industry data, which is covered in the next section.

Weaknesses

- OES does not track several data points that would be helpful, including demographics information, self-employed information, annual openings, and employment projections.
- Not all metropolitan and nonmetropolitan areas have information for all occupations.
- Only 62% of employment is covered in the OES survey (compared to the 98% of wage-and-salary jobs captured by QCEW), which excludes all industries under NAICS 11 (agriculture, forestry, fishing, and hunting) except for logging, support activities for crop production, and support activities for animal production.
- OES surveys approximately 200,000 establishments per panel (every six months), taking three years to fully collect the sample of 1.2 million establishments, which creates a substantial lag in the data.
- Much of the OES data (particularly historical trends) is difficult to find and is especially difficult to export or extract.

Example

For a potential graphic design program, occupation analysis is much easier than it would be for a more nebulous program, such as English literature or history. That's because the degree directly corresponds to an occupation, such as graphic designers (27-1024).

GRAPHIC DESIGN OCCUPATION ANALYSIS

REGION	NATIONAL	NW (WA/OR/ID)	WA STATE
TOTAL JOBS	201,799	8,537	4,796
CHANGE	6%	10%	12.8%
MED. EARNINGS/HR	$21.55	$22.32	$23.86

Source: EMSI 2015.1 Class of Worker (Employees)

Growth at the state, regional, and national level is great news for an online program. It suggests that there will be a very large pool of prospective students with interest in a career in graphic design. Your program could help them reach their goals.

Industry data

Industry data is another great source that can deepen your understanding of labor market opportunities. Instead of looking at an individual occupation, you can view how a variety of occupations are captured within an industry—everything from facilities personnel to senior executives—and assess job counts, growth, average annual earnings, and regional industry concentration (also known as location quotient).

What can this data tell you? It can offer not only an idea of the entry-level occupations available to your graduates but also a broader picture of how the industry is doing overall, which can indicate ongoing opportunities available throughout your graduates' careers.

Also, as discussed above, the target occupation for your graduates is likely employed by a variety of industries. Knowing which of those industries are doing well versus which are doing poorly can help you strategically plan your course offerings so that your students receive an education that gives them an advantage in the healthier fields.

Much of this data is available from the Quarterly Census of Employment and Wages (QCEW) program, which is also managed by the BLS and organized in a taxonomy called the North American Industry Classification System (NAICS).

The QCEW program publishes a quarterly count of employment and wages reported by employers, covering 98% of US wage-and-salary jobs—available at the county, MSA, state, and national levels by industry. Unfortunately, there is a five- to six-month lag time between when the BLS collects the data and when it is reported, and the county-level data, which is the greatest level of geographic detail available, is largely suppressed to help protect the privacy of local businesses. So although this data is a great resource, there are significant challenges for using it to conduct a comprehensive analysis.
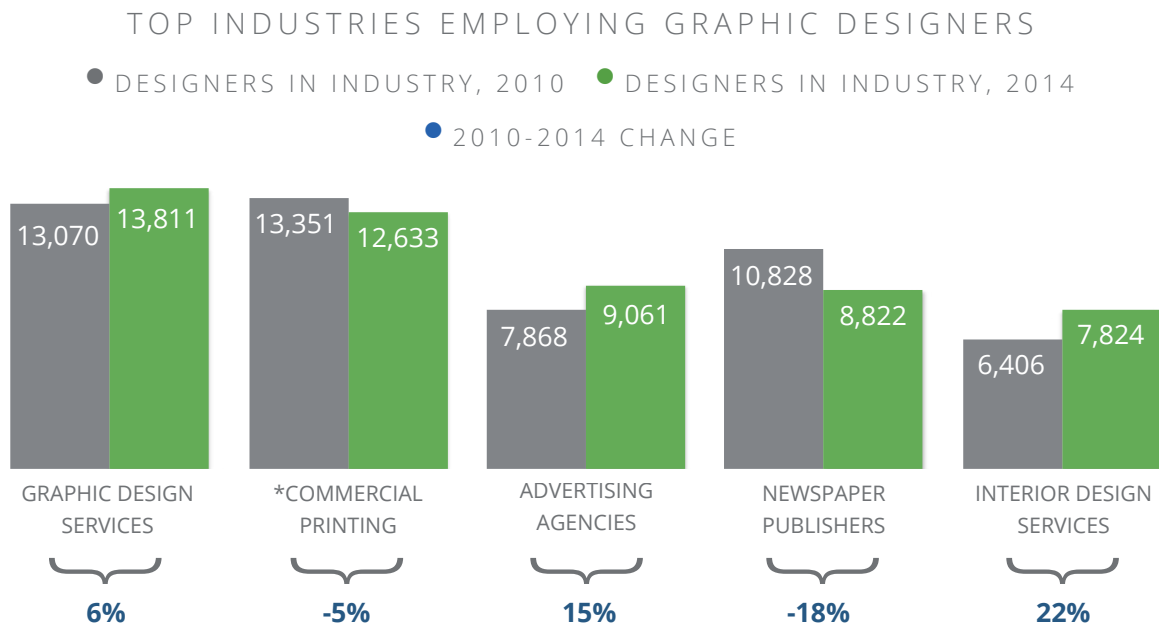
Example

As demonstrated in the chart, industry data provides insight into how you might structure a program. (It may be valuable to conduct the following analysis for your region and state as well—not just the nation.)

For example, even though commercial printing is the second largest employing industry of graphic designers, its number of graphic design jobs is shrinking—largely due to the overall decline of the industry.

And the same analysis applies to newspaper publishers. So it might be a good idea to de-emphasize commercial printing and newspaper design in your curriculum, instead adding courses that could provide skills and insights into an industry that is rapidly booming for graphic designers (such as interior design services).

TOP INDUSTRIES EMPLOYING GRAPHIC DESIGNERS

● DESIGNERS IN INDUSTRY, 2010　● DESIGNERS IN INDUSTRY, 2014

● 2010-2014 CHANGE

Industry	2010	2014	Change
GRAPHIC DESIGN SERVICES	13,070	13,811	6%
*COMMERCIAL PRINTING	13,351	12,633	-5%
ADVERTISING AGENCIES	7,868	9,061	15%
NEWSPAPER PUBLISHERS	10,828	8,822	-18%
INTERIOR DESIGN SERVICES	6,406	7,824	22%

Source: EMSI 2015.1 Class of Worker (Employees)

Weaknesses

- Approximately 60% of county-level data (QCEW's most-detailed level) is suppressed.
- QCEW does not report on self-employed, military, railroad, and certain farm, domestic, and non-profit workers.
- There is about a five- to six-month lag between when the quarterly data is collected and when it is released.
- The interface of the QCEW database is clunky; it is not easy to customize the data by adding or removing columns to tables, changing the order of columns, etc.

3 Using Business Data and Job Postings for New Program Development

When it comes to information about potential interest and course planning, who better to look to than the businesses most likely to hire your graduates? Provided by a variety of venders, business data allows you to research a given geography (local, statewide, regional, or national) down to specific business names for a particular industry or set of industries. Or, if you already know which business you'd like to speak with, you can search for their contact information on your own. Utilizing business data may be as simple as collecting contact information for the top businesses in a certain field and geographic location, or you may prefer to analyze job postings for insights into skills and curriculum planning.

General Business Data

Business data of the former variety helps you determine who might be a good resource as you develop your program, allowing you to initiate valuable conversations and collect expert feedback. In the initial stages of program qualification, these conversations can help you decide whether or not your program will be in demand, or if it should be tweaked slightly in order to be more aligned with workforce needs and, therefore, non-traditional student interests. Unfortunately, this process can be quite time-consuming.

But there's an upside. By collaborating with businesses for program planning, your institution can also cultivate partnerships that may ultimately help you secure internships or job placement opportunities for students, further strengthening your new program's appeal and reputation.

In addition, occupation comparisons and skills transferability information, largely accessed via conversations with businesses, can offer valuable analysis into prospective student markets. Countless prospective students may be working in lower-level yet similar jobs to what your program trains for, but it may be difficult to identify those markets without speaking to businesses directly.

Weaknesses

- Business data is self-reported, collected by venders primarily through surveys, which means that some of the information is unreliable.
- Business data is frequently out of date and the quality varies from vender to vender.
- Business data can also be quite expensive.

Job Posting Analytics

Job postings analytics (JPA) can help you conduct in-depth analysis without having to interview businesses one by one. By using job postings to familiarize yourself with the skills and knowledge that businesses look for in an ideal candidate, you can structure your new program to lead students to success. Especially when job postings are viewed in context with hires, you gain perspective on potential skills gaps and surpluses, which can inform curriculum planning. This process will help your program prepare students for the current job market, thereby appealing to today's learners and nontraditional students alike.

But JPA has several limitations. Most notably, job postings are only one of many ways that businesses recruit, and many companies don't use them at all. So the data is frequently just a snapshot.

Job postings are most often used to search for candidates in high-skill fields, or at least fields that frequently post jobs on the internet. So they may not provide a large enough sample of ads to inform your program planning, if you're creating a program in a field that hires by word of mouth or other methods.

Due to this bias, job postings are also a poor measure of overall hiring demand, although they can offer a rough idea of who is searching for talent and what they're looking for.

Weaknesses

- JPA may provide limited insight, depending on the field that your new program will train for.
- JPA is a subpar measure of hiring demand.
- Job postings describe the ideal candidate and are sometimes not grounded in reality, which means your graduates may not need all of the skills listed to be successful.
- Many companies post duplicate ads for the same job (indicating they are aggressively seeking talent), which can be cumbersome to sort through.

Example

There are a variety of venders and websites, such as Indeed.com, where you can access job postings data. Here are the companies that posted the most ads for graphic designers in Washington between May 2014 and April 2015:

TOP COMPANIES ADVERTISING FOR GRAPHIC DESIGNERS
(WASHINGTON STATE, MAY 2014 – APRIL 2015)

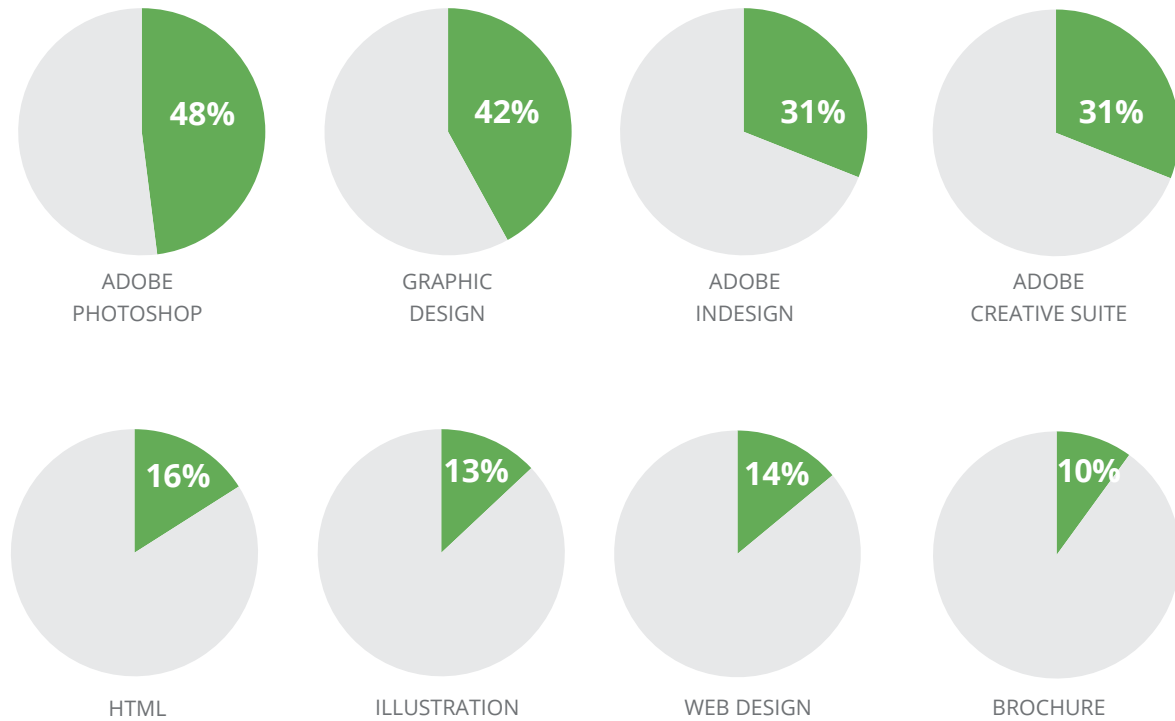| COMPANY	TOTAL/UNIQUE POSTINGS (2015)	POSTING INTENSITY
ROBERT HALF INTL. INC.	125/61	2:1
MICROSOFT CORP.	319/34	9:1
OUTSOURCE PARTNERS INTL. INC.	220/26	8:1
CREATIVE CIRCLE	49/18	3:1
AMAZON INC.	48/18	3:1

Source: EMSI 2015.1 dataset

By analyzing posting intensity (the number of duplicate postings per unique posting), you can see which companies are searching most vigorously for new hires. You can contact those businesses for professional insight into program development, or simply peruse job postings for information about necessary skills, cities with the most hiring activity (which could inform marketing strategies for your potential program), and level of required certification.

The most commonly listed skills found in job postings for graphic designers include:

DESIRED SKILLS FOR GRAPHIC DESIGNERS

● PERCENT OF POSTINGS WITH SKILL LISTED

48%	42%	31%	31%
ADOBE PHOTOSHOP	GRAPHIC DESIGN	ADOBE INDESIGN	ADOBE CREATIVE SUITE

16%	13%	14%	10%
HTML	ILLUSTRATION	WEB DESIGN	BROCHURE

Source: EMSI 2015.1 dataset

This information could certainly inform curriculum planning. In this case, the HTML and web design skills may be the most interesting. It is not enough for graphic designers to know how to use Adobe products and create static materials; a good graphic design program will also teach its students how to code and design websites.

Conclusion

Faculty and staff tasked with researching new program opportunities are in a unique position to strengthen proposals as much as possible before they make their way to leadership. But the best news? This process of gathering and analyzing data does not have to be time-consuming or difficult; when the data is packaged well, you can do it in an afternoon.

With quality data, you can quickly quantify the demand for your new program, pinpoint new markets for prospective nontraditional and traditional students alike, and identify course offerings that would make your program (and potential graduates) more competitive.

Ultimately, if your program is approved, this data will also provide your leadership with trustworthy documentation they can use to justify a new allocation of resources, making your research well worth the effort.

ABOUT EMSI DATA

Current, complete, and ready to use

As we've detailed in this report, education and labor market data is not the easiest to work with; it is scattered, full of holes, and frequently obsolete. But EMSI makes finding, analyzing, and sharing this data easy. We collect labor market data from more than 90 different sources, bring it up to date, and deliver it in user-friendly software so that you can use it effectively.

EMSI's composite dataset gives you valuable insight on the following (and much more):

• Education institution data, including degree completions
• Occupation growth, decline, and projections
• Industry trends and projections
• Business contact information
• Job posting analytics
• Occupation comparisons and skills transferability

Detailed

Typical labor market data ignores much of the economy, suppressing 60% of county-level data about wage-and-salary workers. Government data also generally excludes proprietors, understating the total number of workers by an average of 17%. In contrast, EMSI data removes suppressions and includes proprietors, painting a more complete picture of the workforce.

Comprehensive job posting analytics

EMSI collects its job postings data by scraping approximately 30,000 websites, then removes duplicates to present an estimate of total unique postings. EMSI is also able to provide the following insights about job postings so that you can extract key information at a glance:

- Occupation (O*NET AND SOC)
- Location (nation, state, MSA, and county)
- Top Skills (national)
- Unique Skills (national)
- Certifications (national)
- Posting Intensity
- Top Companies Posting (+ intensity/trend)
- Top Cities Posting (+ intensity/trend)

Linked data, intuitive navigation

With EMSI, you can explore the data you need to conduct new program analysis—presented in a way that real people can understand. Our education and labor market data software contains linked data tables, featuring staffing patterns and occupation-to-program mappings that allow you to easily jump from information about educational institutions to occupations, to industry trends, and then to business data, all within a few clicks. We also feature many of these mappings in presentation-ready reports—including program, occupation, and industry overviews.

Search, customize, export, share

In EMSI's education and labor market data software, you can effortlessly find what you are looking for by searching for programs, job titles, and industry names. When you find the information you need, you can quickly customize the results by adding/removing columns. Then export and share in a matter of seconds.

ABOUT EMSI

Economic Modeling Specialists Intl., a CareerBuilder company, turns labor market and education data into useful information that helps organizations understand the connection between education, economics, and employment. Using sound economic principles and combining over 90 data sources, we build user-friendly software and reports that help universities and colleges strengthen their institutions, empower the people they serve, and prosper their communities.

WANT MORE INFORMATION?

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