Deloitte and Chmura have partnered together to support numerous higher education clients, combining the project management and strategic execution of Deloitte with Chmura’s economic analysis delivery.

Presenter Introductions

Dan Meges
Chmura Economics & Analytics
Economist & Business Development Manager

Jen Tutak
Deloitte Consulting
Project Manager
Public Sector, Higher Education Practice

Jesse Ramsey
Deloitte Consulting
Project Analyst
Public Sector, Higher Education Practice

Loren Osgood
Deloitte Consulting
Engagement Manager
Public Sector, Higher Education Practice

Welcome 1
Market Analysis Setup 6
Competitive Landscape 12
Market Need 24
Student Demand 34
Review the Findings 37

Learning outcomes: to become acquainted with the methodology for conducting market analyses

• Identify competitor programs and the competitive region for a proposed academic program
• Assess the competitive landscape for a proposed academic program
• Gather and validate price points of competitor programs
• Conduct qualitative assessment of competitor programs
• Identify occupations associated with the proposed academic credential
• Assess job markets and demand for proposed academic credential by industry and geographic region
• Assess the number of recent graduates with comparative academic credentials
• Use market analysis data to make decisions about development and marketing of new academic programs
The process for conducting a market analysis begins with the setup phase, which sets the stage for the remaining phases. Each phase looks to answer a different piece of the same question: does IU have a place in the market?

1. Setup
   • Assuming the market analysis provides a favorable outlook for the proposed program, would IU have enough time to begin offering the program in X months?

2. Competitive Landscape
   • Would IU be “1 of 100” or “1 of 10” offering Program X in a completely online format?
   • Would IU have a price point advantage taking into consideration the price points in the given region?

3. Market Need
   • Would the related (i.e., corresponding to the academic program in question) industries be growing or shrinking as the 1st wave of students are expected to graduate?

4. Student Demand
   • Would graduates head into growing industries in need of new talent?

There are four phases to a market analysis: setup, competitive landscape, market need and student demand

The market analysis depends heavily on the concrete vision and academic plan of potential online programs. Definitive responses to the following questions and items need to be established prior to conducting the market analysis.

What program is being proposed as an addition to IU's online portfolio?

1. Identify the academic focus (i.e., major) as well as any minors, specializations, tracks, cognates, concentrations, etc.
2. Identify the program structure: undergraduate (4-year), undergraduate degree completion, undergraduate certificate, graduate, graduate certificate, or doctorate
3. Identify the Campuses slated to offer the program
Step 2: Identify the specific program’s Classification of Instructional Program (CIP) number

What is a CIP?

• Example of a CIP number = 13.0701 (International and Comparative Education)
  • Breaking down the code: 13 refers to the main category of academic programs. 07 refers to the subgroupings within the main category. 01 refers to the specific program CIP.

Why are CIPs important?

• The CIP acts as the basis for identifying competitors, relevant occupations (i.e., market need), and student supply into the market. Further explanation will be provided in the following sections of this presentation.

Click here to learn more about CIPs...

Step 3: Develop the work plan for conducting the market analysis

Given the regular workload for faculty, administrators and students, a work plan provides a framework for what needs to be completed, by whom and by whom.

1. Identify timeframe
   • Pinpoint the intended start (i.e., semester and year) of the program offering and work backwards in building out the timeframe.

<table>
<thead>
<tr>
<th>SAMPLE PROGRAM</th>
<th>Month 0</th>
<th>Month 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date of Market Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Confirmed and Content Developed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Start Date</td>
<td></td>
<td>September</td>
</tr>
</tbody>
</table>

2. Identify team (working group)
   • Determine the necessary skill sets required of team members.
   • Identify and confirm team members that will conduct the market analysis from an objective perspective.

3. Develop weekly/bi-weekly/monthly cadence of meetings and activities.

Step 4: Engage program faculty, administrators, and students through a focus group or similar meeting

Start with the experts:

Engage individuals closest to the proposed academic program since they have a wealth of knowledge to provide.

Existing On-Campus Programs

Some proposed online programs may exist on-campus. Insight and reactions to the following questions for existing on-campus programs will greatly benefit the market analysis:

• What are the marketed strengths (i.e., what appeals to students) of the program?
• What are the distinguishing factors about the program? In other words, how has the program positioned itself in the market, compared to other colleges and universities?

New Programs to IU

New programs not currently offered by IU require more groundwork. Responses to questions such as the ones listed will be helpful in answering much needed questions further in the market analysis process:

• What does the proposed program aim to accomplish?
• Why is the program being proposed: out of response to student interest or economic need?

Conduct follow-up meetings as needed with key faculty, administrators, and students.
The market analysis assesses IU's competitive positioning as well as the economic need of various regions. There are three suggested regions to consider when conducting the market analysis: 1.) Indiana; 2.) Indiana and neighboring states (excluding upper peninsula of Michigan); and, 3.) United States.

Consideration should be given to the overarching mission of the academic program when identifying the regions. For example, a baccalaureate degree completion program will generally focus on Indiana and neighboring states, as opposed to a national perspective.

**Why should a market analysis be concerned with geographic regions?**

**Step 5: Identify the regions that should be included in the analysis**

<table>
<thead>
<tr>
<th>Indiana Focus</th>
<th>Regional Focus</th>
<th>National Focus</th>
</tr>
</thead>
</table>

**Step 1: Define the criteria to be used for identifying competitors**

**How do you define IU's competition?**

Each proposed program will require a different definition of competition. The online education market is at the beginning stages of understanding what competition means and who competes with whom. Online education does not necessarily adhere to the market branding colleges and universities have traditionally experienced.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery Format</td>
<td>Online, Hybrid, On-Campus</td>
</tr>
<tr>
<td>State</td>
<td>IL, IN, KY, MI, OH, etc.</td>
</tr>
<tr>
<td>Type of Institution</td>
<td>4-year public, 4-year private non-profit, 4-year private for-profit, 2-year public, 2-year private, etc.</td>
</tr>
<tr>
<td>Academic Program</td>
<td>As specific as possible (e.g., Informatics as opposed to Computer Science)</td>
</tr>
<tr>
<td>Type of Credential</td>
<td>Associate's/Bachelor's/Master's/Doctoral degree, Undergraduate/Graduate certificate, etc.</td>
</tr>
<tr>
<td>Program Specific</td>
<td>This option allows programs to identify whether an alternate criterion makes sense (e.g., only AACSB accredited business schools)</td>
</tr>
</tbody>
</table>
Step 2: Identify competitors using CollegeNavigator and other methods

1. **CollegeNavigator.** The National Center for Education Statistics (NCES) has a tool, called CollegeNavigator, that allows individuals to enter search criteria based on institutional characteristics, geographic areas, programs/majors, award levels, and delivery format (i.e., distance learning).

2. **Industry Ranking.** Standard industry rankings (e.g., US News & World Report, GetEducated.com, Times Higher Education World University Rankings, The Princeton Review, Forbes College Rankings) hold a significant marketing value as they convey credibility to potential students.

3. **Informal Search.** For newer programs, an informal search (e.g., Google) often provides the best approach to identifying competing institutions offering the specific or similar program.

4. **NCES Classification of Instructional Programs (CIP) to Standard Occupational Classification (SOC) Crosswalk.** Using NCES crosswalks (i.e., CIP-to-SOC) provides an additional avenue for identifying competitors. This method relies on industry experts identifying a common group of occupations typically resulting from one or more CIPs (programmatic areas). This approach is helpful when a sufficient number of competitors cannot be identified. It allows the analyst to identify related CIPs by reviewing the crosswalks, which can then be selected as a search criterion (i.e., program/major) in CollegeNavigator.

**CollegeNavigator is the most comprehensive and time effective publicly available college search tool**

Start by selecting the chosen region using the quick search

- Select states using the drop down option or map.

Search for universities offering similar programs by browsing for the appropriate program(s)

Programs are based on CIPs and are listed alphabetically—not by CIP

- Click the “Browse for Programs” icon.
- Check the Distance Education box if searching for competitors offering online programs.
Choose one or more programs to include in the search
Additional programs may dramatically increase results

- Select relevant program(s).

Selection Hints:
• Some programs have an exact match (e.g., Informatics).
• Some programs do not have an exact match (e.g., Applied Science), which requires a closer look at alternative options such as...

*Orphan* programs may require a different identification approach (e.g., informal search).

Complete the quick search by choosing the appropriate award levels and institution types
Additional search options are available but not necessary

- Select the awards.
- Select the types of institutions.
- Click “Show Results”.

Export the results to document and organize the list of competitors

- Click the “Export Results” button and follow the instructions.

Sample search with the following criteria:
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Selection</th>
<th>Institutions appear to be competitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>Informatics</td>
<td>10 institutions appear to be competitors</td>
</tr>
<tr>
<td>Institution Type</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

10 institutions appear to be competitors.
Step 3: Validate CollegeNavigator search results, in addition to institutions identified using other approaches

Although CollegeNavigator provided 10 results for the Informatics example, a closer look is required to verify that each institution offers a comparable program.

1. Using the list downloaded from CollegeNavigator, search each institution’s website to determine whether they offer the program in question.
   - When conducting your web search, verify that the institution and program meet the previously defined competitor criteria.

2. Upon validation of the competitor list, complete the "Competitor Criteria and Identification Guide" and review with program leadership (i.e., if the program is currently offered by IU).

3. Revise list based on feedback.

Step 4: Conduct qualitative assessment of competitor programs

Conduct a qualitative assessment of each competitor program.

Hints for what to look for...

When reviewing competitor websites, take note of the following items:

- **Academic Focus.** Majors, minors, specializations, tracks, cognates, etc.
- **Curricular Structure.** Minimum/maximum credits required, degree combinations, credit transfer guidelines.
- **Target Audience.** Adult learners, executives, high school students, military, etc.
- **Marketed Strengths.** What are the program’s selling points from a student perspective?
- **Distinguishing Factors.** What are the unique selling points that differentiate the program in the market?
- **Rankings.** Does the program or institution have relevant industry rankings?

Step 5: Gather pricing data for competitor programs

- Gather programmatic costs, fees and required number of credits for competitor programs.

Considerations:

- **Online:** increasing number of institutions are charging a different online cost (some public institutions charge the same amount for in-state and out-of-state residents), difficult to find "online" pricing.
- **# Credits:** range of credits required, degree completion for undergraduate programs, quarter vs. semester hours, transfer credits.
- **Tuition:** in-state vs. out-of-state, presented in different manners (annual, semester, per credit, per course, per six months (Western Governors University), upper vs. lower division courses).
- **Fees:** market ranges from no fees to 15+ fees, presented in different manners (annual, semester, per credit, per course, per term, in-state vs. out-of-state, e.g., 1-6 credits).

<table>
<thead>
<tr>
<th># Credits</th>
<th>Tuition/ Credit</th>
<th>Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3 credits</td>
<td>$1000</td>
<td>Technology fee</td>
</tr>
<tr>
<td>4-6 credits</td>
<td>$2000</td>
<td>Library fee</td>
</tr>
<tr>
<td>7-9 credits</td>
<td>$3000</td>
<td>Environmental sustainability fee</td>
</tr>
<tr>
<td>10+ credits</td>
<td>$4000</td>
<td>New student fee</td>
</tr>
<tr>
<td>Distance learning fee</td>
<td>Application fee</td>
<td>Graduation fee</td>
</tr>
</tbody>
</table>

Total Program Cost = # Credits * Tuition/ Credit + Fees + Distance Learning Fee + Application Fee + Graduation Fee
While gathering qualitative and pricing data is time intensive, there are some helpful hints that may speed up the process:

**Helpful Hints:**

- **Online:** similar to IU East, look for each institution’s online program offerings or distance learning office where you are more likely to find “online” costs distinct from on-campus tuition and fees.
- **# Credits:** use assumption for undergraduate degrees of 120 credits for a bachelor’s, use assumption for degree completion (bachelor’s) of 60 credits, graduate degrees require a case-by-case review.
- **Tuition:** calculate tuition into a per credit cost – this is needed to compare per credit tuition costs across the competitors.
- **Fees:** calculate fees into total program cost – more difficult to put in a per credit format.

**Approach for Identifying Pricing:**

- Search individual websites.
- Contact the institution directly requesting cost information.

---

**Market Need**

Assessing Industry Needs

There are essential components to consider when reviewing the supply and demand sides of a market:

To sufficiently review these components, take a multi-faceted approach:

- Create long and short-run supply & demand model
- Localize employment data & forecasts
- Examine multiple geographies
- Understand strengths/weaknesses of equilibrium assumptions
  - Some analysis is calibrated of a national norm
  - Some analysis could/should include a skill-bias in employment
- Little quality delineation in many models
- Leverage existing literature & findings
- Mine job posting data for detailed skill-sets & competencies
Student and occupational trends and metrics form the basis of the economic analysis

Supply side:
- Current graduates in relevant program (smoothed)
- Enrollment trends by program
- 3 or 5 year trends in awards by program
- Unemployment rate by education level and/or occupation
- Short-run/medium-term estimate of education degree trend
- Long-term projection of educational attainment

Demand side:
- Current employment
- Recent job growth
- Long-term projection of occupation growth
- Long-term projection of expected gaps
- Wage trends by occupation

Analyze market trends and forecasts can be accomplished using tools such as Microsoft Excel

Identify degree-to-occupation (CIP-to-SOC) mapping

CIP-to-SOC crosswalks allow universities to align their supply of graduates to market demand for jobs.

1. Review the “Crosswalk Validation Guide”
2. Validate crosswalks and geographical focus with key IU stakeholders
3. Define a mechanism to allocate degrees across occupations
   - In some cases one program could feed multiple jobs—how do you determine how many degreeed graduates “flow” into several options
4. Define geographical region to assess local job market
   - This should be based on the “natural” labor shed of the graduates of IU: where do they typically find jobs
   - Census-based commuting patterns can help
   - Career services list of typical companies recruiting for these graduates can also be a guide
5. Review the “Occupational Data Source Guide”
Mappings are not always straightforward—some require a broader net

Degrees naturally feed into employment:
- Some occupations are **licensed** and the crosswalk is easy:
  - Associate’s in Registered Nursing is likely to find work as registered nurses
- Some occupations are **unlicensed** but easy:
  - Bachelor’s in Biochemistry becomes a biochemist
- Some occupations have a **broader array of paths**:
  - Writing intensive (editors/journalists)
  - Math intensive (accountants, actuaries)
- Some occupations have very broad crosswalks:
  - General Business/Management

To continue the analysis, gather occupational data and build assumptions

1. Gather data relevant to geographical focus
   - Include occupations by degree level
   - Include Indiana’s occupational unemployment into data analysis
   - Include H-1B visa population into job market projections
2. Identify necessary job market assumptions and bake into analysis approach
   - For example, Georgetown University’s Center on Education and the Workforce builds assumptions into their projected job market numbers
   - BLS/Census CPS survey is a helpful resource
3. Analyze occupational outlook and identify key findings
   - Create/determine occupations projections over relevant time-frame in local area/geography

Use the occupational data to assess the short-run supply and demand

1. Determine the number of students receiving awards relevant to the local job market
   - Forecast changes in population by age-cohort in relevant area/geography
2. Conduct training concentration analysis
   - Translate awards into occupations
   - Compare local awards-to-employment level to national norm
   - Compare mix of locally awarded degrees (level) with corresponding mix of typical educational attainment for a given occupation
3. Analyze graduation data and identify key findings
4. Develop recommendations
Identify and assess space in the market using various models

Making sense of the data:

- Develop a model that gives weight to certain data elements as well as one that sifts various data points
  - Different models (short v. long) may provide mixed results
  - Recent job gains may be at odds with long-run employment trends
  - Forecasts are not always accurate
  - Options range from:
    - Simple scorecards
    - Variance based scales (normalize)
    - Regression based weighting

To conclude, here is a recap of the basics for assessing the market need

Practical Checklist

Each program analysis should answer these basic questions:

- What is the labor market telling me?
- What are the employment trends?
- What are the wage trends?
- Is this area growing? Which industries?
- What is the replacement demand?
- What is the relevant geography?
- How much competition do I have in this market?
- Am I competitively priced?
To consider student demand, identify and gather graduation data for IU and institutions listed as competitors

1. Identify graduation data sources (e.g., NCES, IU) to be used in analysis
2. Gather relevant IU data
3. Gather competitor data based on geographical focus
   - Include delivery method (where applicable), place of residence at time of enrollment and other key demographic information
   - Include foreign-born student population into job market projections
   - Examine award trends by program/school (program-base market share analysis)
   - Examine enrollment trends
     - Remember research shows that students pick majors based upon:
       - Perceived competency
       - Interest in subject
       - Parental guidance

Finally, analyze the degree-level mix to further validate where students are finding jobs and with which degrees

Examine the awards trends by geographic market in terms of the actual employment mix by degree level.

- Even when supply & demand for postsecondary education can be thought of as in "equilibrium" some misalignment can be present:
  - The mix of associate degrees, bachelor’s, and graduate-level (masters and up) should approximately mirror the mix of occupations actually performing the job
  - Some occupations with high replacement demand can create space disproportionately at the graduate level
  - Conduct some analysis as to "why" if misalignment is detected
    - Peculiar industry mix
    - Labor market typically "imports" specific competencies
    - Student demand/competency driven

Review the Findings

Next Steps
Finalize the market analysis: collate findings and develop objective recommendations

- Document recommendations and key findings throughout the process.
- Review aggregate findings
  - What are the market strengths?
  - What are the considerations?
  - Are there outstanding questions?
  - Could IU have a price point advantage?
- Develop a report that answers the question, “Does IU have a place in the [insert program] market?”
- For promising programs, move forward with internal review of IU’s capacity to implement the program (i.e., curriculum development, marketing, faculty resources, etc.)
- Submit final report to OOE

Thank you for participating in today’s workshop

Contact the OOE for additional information on conducting market analyses for proposed online programs