


## Indirect Measures of Student Learning

Presented by:  
Institutional Research (IR) Office  
University of Scranton

January 23, 2015

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## Agenda

- Introductions
- Direct vs. Indirect Measures
- Course, Program, and Institutional Assessment Measures
- Activity
- Break
- Institutional Effectiveness and the IR Office
- Surveys
- National Surveys
- Where to go for help

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## Institutional Resource (IR) Office

- Valerie Taylor, Director
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### Direct and Indirect Evidence

- Direct evidence of student learning is tangible, visible, self-explanatory, and compelling evidence of exactly what students have and have not learned.
- Indirect evidence consists of proxy signs that students are probably learning.

(Suskie, 2009)



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### Indirect Assessment Methods

- Focus Groups
- Advisory Committee
- Student Activity and Study Log
- Institutional Data
- External Reviewers
- Student Surveying and Exit Interviewing
- Alumni Surveying
- Employer and Co-op Surveying
- Curriculum and Syllabus Analysis
- Interviews
- Course Evaluations
- Reports



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### Direct & Indirect Measures - Course

#### Direct

- Course and homework assignments
- Examinations and quizzes
- Standardized tests
- Term papers and reports
- Observations of field work, internship performance, service learning, or clinical experiences
- Research projects
- Class discussion participation
- Case study analysis
- Rubric scores for writing, oral presentations, and performances
- Artistic performances and products
- Grades that are based on explicit criteria related to clear learning goals

#### Indirect

- Course evaluations
- Test blueprints
- Percent of class time spent in active learning
- Number of student hours spent on service learning
- Number of student hours spent on homework
- Number of student hours spent at intellectual or cultural activities related to the course

Middle States Commission on Higher Education, 2007



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### Direct & Indirect Measures - Program

<p><b>Direct</b></p> <ul style="list-style-type: none"> <li>• Capstone projects, senior theses, exhibits, or performances</li> <li>• Pass rates or scores on licensure, certification, or subject area tests</li> <li>• Student publications or conference presentations</li> <li>• Employer, Co-op and internship supervisor rating of students' performance</li> </ul>	<p><b>Indirect</b></p> <ul style="list-style-type: none"> <li>• Focus group interviews with students, faculty members, or employers</li> <li>• Registration or course enrollment information</li> <li>• Department or program review data</li> <li>• Co-op supervisor surveys</li> <li>• Student perception surveys</li> <li>• Graduate school placement rates</li> </ul>
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*Middle States Commission on Higher Education, 2007*

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### Direct & Indirect Measures - Institutional

<p><b>Direct</b></p> <ul style="list-style-type: none"> <li>• Performance on tests of writing, critical thinking, or general knowledge</li> <li>• Explicit self-reflections on what students have learned related to institutional programs such as the co-op experience</li> </ul>	<p><b>Indirect</b></p> <ul style="list-style-type: none"> <li>• Locally-developed, commercial, or national surveys of student perceptions or self-report of activities (NSSE)</li> <li>• Transcript reports including institutional benchmarks, such as graduation and retention rates, grade point averages of graduates, etc.</li> </ul>
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*Middle States Commission on Higher Education, 2007*

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### Direct and Indirect Measures of Student Learning

- It is important to distinguish between direct and indirect methods
- Units should use at least one direct measure
- First use direct measures of student learning then use indirect measures to support
- Direct and indirect evidence should complement each other when used in tandem and can become more than the sum of the two

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### Indirect Measures Limitations & Considerations

- Do not evaluate student learning *per se*, and therefore should not be the only means of assessing outcomes.
- As with direct measures, they do not necessarily imply that value-added learning has occurred.

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### Activity

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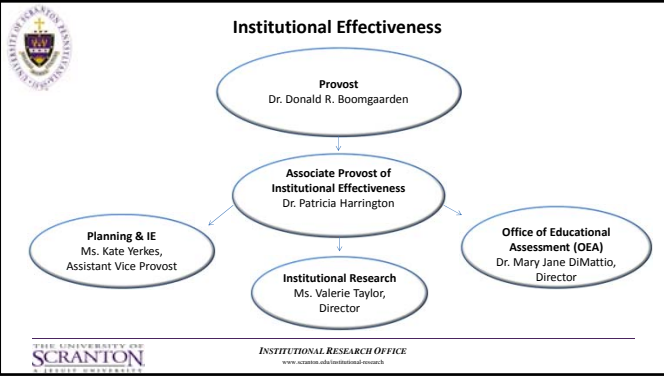
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## IR Office

- Surveys\*
- Dashboards\*
- Enrollment, Graduation Reports\*
- Retention and Graduation Rates\*
- Benchmarking\*
- Fact Book\* and Fact Sheet\*
- Data Standards
- Government and Consortium Reporting
- Ad Hoc and Special Studies
- IE and Planning Support

*\*Indirect Measures of Student Learning*

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## IR Office

- <http://www.scranton.edu/pir/institutional-research/index.shtml>

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## Indirect Measure - Surveys

<p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>• Surveys can be an important in understanding student's academic <u>needs and their perception</u> of their educational experience. Additionally, surveys can be used to determine students' <u>satisfaction</u> with the services offered at the university as well as program-specific services such as advising, etc.</li> </ul>	<p><b>Disadvantages</b></p> <ul style="list-style-type: none"> <li>• Surveys are used to gather data regarding the perceptions of individuals about personal experiences. In most instances, this method does <u>not provide direct evidence of knowledge, skills, and abilities</u>. When this method of assessment is implemented, a direct measurement approach should be used as well.</li> </ul>
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## Indirect Measure - Surveys

<p><b>Published Instruments (National)</b></p> <ul style="list-style-type: none"> <li>• Comparability</li> <li>• Good-quality questions</li> <li>• Good breadth of coverage</li> <li>• Evidence of their quality</li> <li>• Identify strengths and weaknesses</li> <li>• Require less of our time</li> </ul>	<p><b>Locally Designed Instruments (In-house)</b></p> <ul style="list-style-type: none"> <li>• Local goals and aims</li> <li>• Greater detail</li> <li>• Practicality</li> <li>• Costs</li> </ul>
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## Break

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## National Survey Overview

- Survey Schedule & Surveys
- Survey Mappings
- Dissemination
- Participation Rates
- Alumni Data

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## NSSE 2014

- Housed at Indiana University's Center for Postsecondary Research
- Large national survey
  - Last year 716 institutions participated
  - 473,633 students
- First administered in 1999 with full-scale implementation in 2000
- [http://nsse.iub.edu/pdf/survey\\_instruments/2014/NSSE%202014%20-%20US%20English.pdf](http://nsse.iub.edu/pdf/survey_instruments/2014/NSSE%202014%20-%20US%20English.pdf)

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## FSSE 2014

- Smaller scale, but still national
  - 143 institutions
  - 18,860 faculty
- Many questions mirror NSSE and provide context
- [http://fsse.iub.edu/pdf/2014/fsse14\\_survey.pdf](http://fsse.iub.edu/pdf/2014/fsse14_survey.pdf)

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## NSSE & FSSE – Examples

<p><b>NSSE</b></p> <ul style="list-style-type: none"> <li>• During the current school year, about how often have you done the following?           <ul style="list-style-type: none"> <li>– Prepared two or more drafts of a paper or assignment before turning it in</li> <li>– Included diverse perspectives in course discussions or assignments</li> </ul> </li> </ul>	<p><b>FSSE</b></p> <ul style="list-style-type: none"> <li>• In your selected course section, how important is it to you that the typical student do the follow?           <ul style="list-style-type: none"> <li>– Prepare two or more drafts of a paper or assignment before turning it in</li> <li>– Include diverse perspectives in course discussions or assignments</li> </ul> </li> </ul>
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## NSSE & FSSE – Examples

<p><b>NSSE</b></p> <ul style="list-style-type: none"> <li>• How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?             <ul style="list-style-type: none"> <li>– Writing clearly and effectively</li> <li>– Thinking critically and analytically</li> <li>– Analyzing numerical and statistical information</li> <li>– Solving complex real-world problems</li> </ul> </li> </ul>	<p><b>FSSE</b></p> <ul style="list-style-type: none"> <li>• To what extent do you structure your selected course section so that students learn and develop in the following areas?             <ul style="list-style-type: none"> <li>– Writing clearly and effectively</li> <li>– Thinking critically and analytically</li> <li>– Analyzing numerical and statistical information</li> <li>– Solving complex real-world problems</li> </ul> </li> </ul>
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## NSSE & FSSE Modules

<p><b>NSSE</b></p> <ul style="list-style-type: none"> <li>• Development of Transferable Skills</li> <li>• First-Year Experiences and Senior Transitions</li> </ul>	<p><b>FSSE</b></p> <ul style="list-style-type: none"> <li>• Development of Transferable Skills</li> <li>• Scholarship of Teaching &amp; Learning</li> </ul>
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## College Senior Survey (CSS)

- Located at the Higher Education Research Institute (HERI) at UCLA
- Smaller than the NSSE
  - 74 schools in 2014
  - Over 13,000 graduating seniors
- Contains some similar questions and some dissimilar questions to the NSSE

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### CSS 2014 – A few examples

- How often in the past year did you:
  - Revise your papers to improve your writing
  - Look up scientific research articles and resources
  
- How often did you engage in each activity during the past year?
  - Performed volunteer or community service work
  - Worked on a local, state, or national political campaign

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### Survey Mappings

- College Senior Survey
  
- National Survey of Student Engagement

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### Dissemination

- Timeline
  
- Types
  - Infographics
  - Reports
  - Presentations
  - Department Summaries

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## Survey timeline

- College Senior Survey 2014
  - April 17 – Survey opens
  - June – Survey closes
  - Summer – Higher Education Research Institute (HERI) creates their comparison reports
  - Sept 26 – HERI sends out our data and comparison report
  - December – IR releases ILO infographics and sends out program summaries
  - January/Early February – IR office releases CSS report

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## Types of Reports

- Infographics
  - CSS ILO Posters
    - <http://www.scranton.edu/pir/institutional-research/institutional-survey-reports/institutional-survey-reports-page.shtml>
  - CIRP Freshman Survey – Then and Now
    - [http://www.scranton.edu/pir/institutional-research/institutional-survey-reports/2013\\_CIRP\\_ThenNow.pdf](http://www.scranton.edu/pir/institutional-research/institutional-survey-reports/2013_CIRP_ThenNow.pdf)
  - Student Participation in HIEPs
    - [http://www.scranton.edu/pir/institutional-research/institutional-survey-reports/UofS\\_NSSE12\\_HImpactPractices.pdf](http://www.scranton.edu/pir/institutional-research/institutional-survey-reports/UofS_NSSE12_HImpactPractices.pdf)

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## Types of Reports

- Written reports
  - Emailed to administration, deans, and department chairs
  - Posted to IR website
- Presentations
  - Given to University committees and governance groups
  - UPC, President’s Cabinet
  - Posted to IR website

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## Types of Reports

- Department/Program Summaries
  - Based on a student's major listed in Banner
  - Emailed to department/program chairs
  - **Require at least 5 student responses to protect confidentiality**

Habits of Mind: Integrate skills and knowledge from different sources and experiences					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Occasionally	4	16.7	25.0	25.0
	Frequently	12	50.0	75.0	100.0
	Total	16	66.7	100.0	
Missing	System	8	33.3		
	Total	24	100.0		

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## Participation Rates

- Tend to be in 25%-33% range
- Important for breaking down results by College/Program
- We do not disaggregate to less than 5 seniors.
  - If a program has 100 seniors a 10% response rate is ok
  - For programs with 15 seniors, 33% would be the minimum

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## Increasing Participation Rates

- NSSE – Things we are doing:
  - Tabling for visibility
  - Giving all participants \$4 Starbucks gift card
  - Announcing across campus media
- What you can do to help
  - Announce the survey in class (we will send an email when we are about to launch)
  - Point out that their feedback is valuable and we do look at it
- Please do not
  - Give extra credit
  - Email students about NSSE

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## Alumni Data

- First steps
  - First Destination Survey with Career Services
    - Existing Data being moved into Banner
    - <http://www.scranton.edu/studentlife/studentaffairs/careers/sub-pages/followup-surveys/2013Survey.pdf>
- Moving forward
  - Postcard survey
  - Five year survey
  - Pre-existing data sources
    - National Student Data Clearing House, LinkedIn, Department Surveys, Facebook, Other ideas?

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- <http://www.scranton.edu/pir/institutional-research/index.shtml>

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## Where else to go for help

- Direct Measures (OEA/CTLE)
- Department/Program Goals and Objectives (OEA/CTLE)
- Course Evaluations (CTLE)

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## Discussion & Questions

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