Developing Program Outcomes to Measure Student Success: A General Approach for Faculty and Administrators

Dr. Paul Fowler
LSU Eunice
Director of Institutional Effectiveness
SACSCOC Accreditation Liaison
Director of Developmental Education
pfowler@lsue.edu
http://pathways.lsue.edu

Outcomes and Basis

- Outcomes
  - Upon the conclusion of this presentation, the participants will understand:
    - measures used by the NCDE.
    - development of goals, objectives, and student learning outcomes (SLOs).
    - collection and reporting data so that comparisons can be made to national benchmarks.
- Basis
  - This presentation is based on "Pathways to Success Tenth Year Report" (Fowler, P. R., 2015)
    - Includes goals, objectives, and student learning outcomes (SLOs) along with how each is assessed
    - Raw and NCDE adjusted data through spring 2016

Is a Statistics Degree Needed to Conduct Program Evaluation?

- **NO!** **(see pages 14-15 for definitions)**
- An understanding of **basic descriptive statistics** along with some **measurement theory** is needed
  - **SLOs** (remember the old behavioral objectives?)
  - Assessment Types
    - **Direct** – analysis of behaviors that demonstrate the extent of learning
    - **Indirect** – evidence of student learning based on opinion
    - **Internal** – assessment of learning created within an institution
    - **External** – assessment of learning created outside of an institution
  - Measures of **central tendency** (mean, median, and mode)
  - **Variance** (or spread) of scores in a distribution…I typically use the standard deviation
  - **Central Limit Theorem** – sampling

- Inferential Statistics is another matter…

The Importance of Assessment?

- To determine if students are learning
- To assess specific outcomes
- To create a cycle of continuous improvement
- Accreditation
- Accountability to stakeholders and taxpayers
- Press
  - *Remediation: Higher Education's Bridge to Nowhere* (CCA, 2012)
  - *Some states have cut back on remedial education, saying it's broken* (Chronicle 9/21/16)

NCDE Criteria for Program Evaluation – Quantitative

- Descriptive data
- How many:
  - Students **participated in the program/courses**?
  - **Hours of tutoring** were offered?
  - **Sections of DE courses** were offered?
- What **percent** of the students **who entered** the course **stayed for the entire term**?
- **Example:** In fall 2016, 93% of the students completed the semester…

NCDE Criteria for Program Evaluation – Quantitative

- How many of those who participated in the course/program **remained for one semester**?
- What percent of those who:
  - **stayed the entire term earned a C or better**?
    - **Example:** 39% in fall 2003 and 9% in fall 2016 were placed on probation
    - Those who withdraw are removed from total n
    - Those who violate the attendance policy are removed from the total n.
- What were the **gain scores** for those taking the course and receiving tutoring?

NCDE Criteria for Program Evaluation – Quantitative

- What percent of those who:
  - **<u>passed</u> the lowest level DE course taken and passed the next level DE course?**
  - **<u>passed</u> the highest level DE course taken and passed the next level curriculum course in that subject?**
  - took one or more developmental courses were **retained from fall to fall**?
    - **Example**: 34% F 03 to 04 and 49% F 15 to 16
  - took one or more developmental courses **graduated within 2, 3, 4, 5, and 6 years**?

NCDE Criteria for Program Evaluation - Qualitative

- To what extent are student users **satisfied** with the program?
- What are **faculty/staff perceptions** of the
  - program?
  - program's students?
- What is the **impact of program on the campus** as a whole?

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Role of Data (including SLOs) in Program Evaluation

- Is the program effective?
  - SLOs – are the students learning anything?
  - Weaknesses – can they be addressed?
    - Incremental change
    - Do no harm to students
    - Student learning
    - Faculty reaction to change or when they disagree
- Decision making…
- Strategic direction…

# *NCDE's Criteria for Program Evaluation*

- Is based on **indirect measures** and does not include **direct assessment of student learning**
- Probably would not be found compliant by an institutional effectiveness evaluator during an accreditation visit
- LSU Eunice directly **assesses SLOs in all DE courses**:
  - Study Strategies (3 cr) and College Reading (3 cr)
  - Pre-Algebra (3 cr) and Introduction to Algebra (3 cr)
  - English Composition (3 cr)
- All SLO information is included in the 10th year report and Institutional Effectiveness documentation referenced on page 15

Elements of Assessment

- **Unit Mission:** A broad, comprehensive statement of the unit's purpose.

- **Unit Vision:** A compelling conceptual image of the desired future.

- **Unit Goals** (see p. 6): A general statement of what is to be accomplished tied to the mission statement and strategic plan.

- **Objectives** (see p. 6): Specific, measurable outcome statements for the accomplishment of goals that include student learning outcomes (where appropriate).

Elements of Assessment

- **Objective with intended outcomes** (see p. 6): Include who is responsible.

- **Assessment/Evaluation Strategies:** The methods used to accomplish objectives, the benchmark and rationale, how often, and whether a sample is used.

- **Assessment Results** (Progress Report): Statement of progress toward accomplishment including accomplishment, sample, how assessment took place, and whether objective was met or not.

- **Improvement Plans:** Statement of changes made based on assessment/evaluation results even if objective was met.
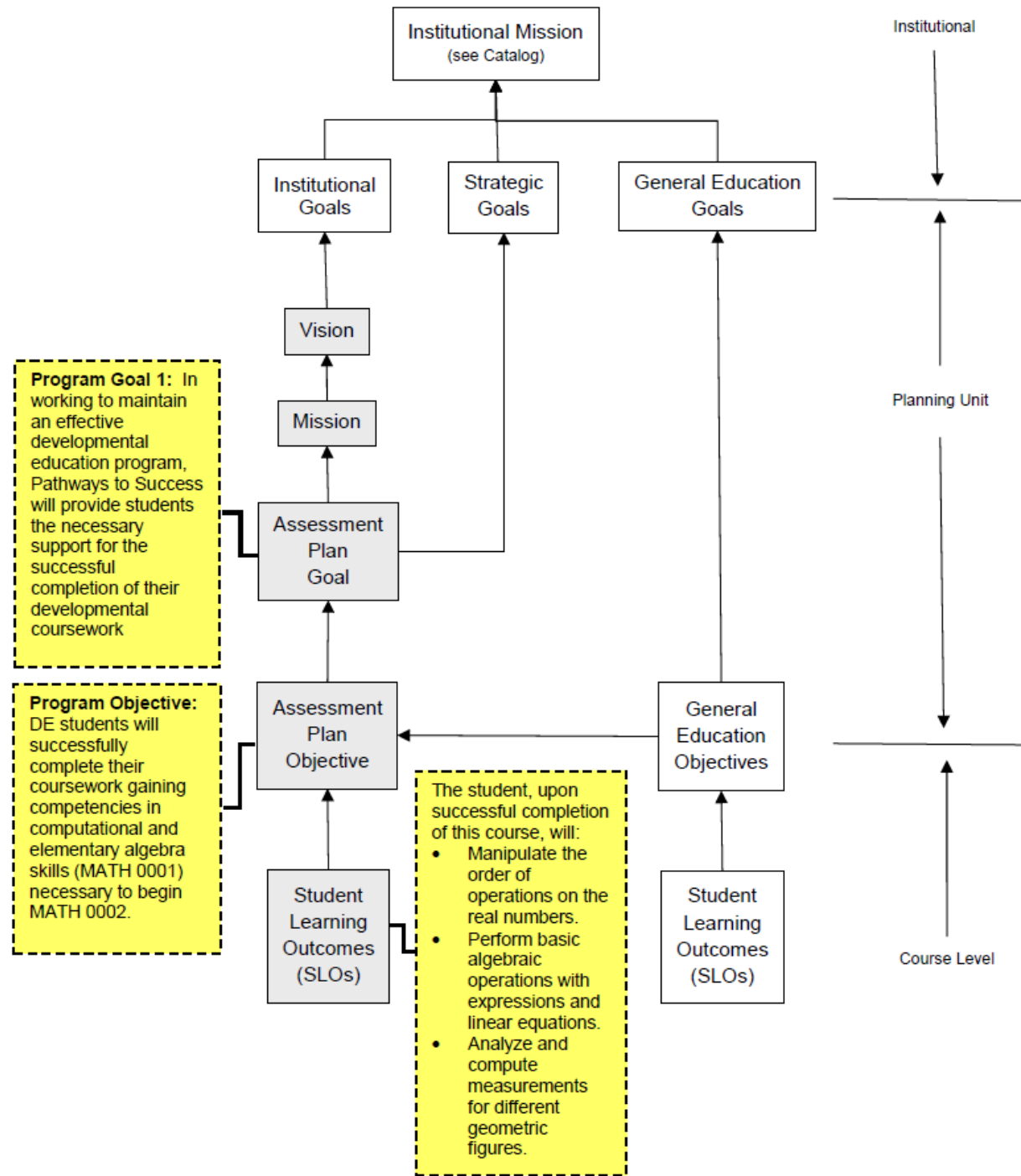
Typical planning elements at LSU Eunice (see page 6)

Example – Goal DE

<u>Program Goal 1</u> (see p. 7): In working to maintain an effective developmental education program, Pathways to Success will provide students the necessary support for the successful completion of their developmental coursework

- – Relates upward to institution's strategic goals
  - 1 – access to higher education
  - 2 – success in higher education
  - 3 – establish partnerships
  - 4 – continuous improvement

Example Continued - Mathematics

- Relates downward to:
  - **Program Objective** (see p. 8): DE students will successfully complete their coursework gaining competencies in computational and elementary algebra skills (MATH 0001) necessary to begin MATH 0002.
    - (**Assessed through course level SLOs**) The student, upon successful completion of this course, will:
      1. Manipulate the order of operations on real numbers.
      2. Perform basic algebraic operations with expressions and linear equations.
      3. Analyze and compute measurements for different geometric figures.

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Objective Example - English

- **Program Objective:** DE students will successfully complete their developmental course work gaining competencies in developmental English composition (ENGL 0001) mechanics, sentence structure, and paragraph structure necessary to successfully begin their first general education English composition course.

- **Course SLOs:** Upon successful completion of this ENGL 0001 course, the student will
    1. Write a clear topic sentence that includes the main idea of the paragraph.
    2. Develop the body of the paragraph with substantial support: evidence, details, and facts
    3. Use proper grammar and punctuation throughout their writing.

Objective Example – Library

- **<u>Objective:</u>** Training in library digital resources based ACRL information literacy standards for students and faculty

- **<u>SLOs</u>** to support this objective are from Association of College and Research Libraries (ACRL) Standards.

  1. The information literate student determines the nature and extent of the information needed.

  2. The information literate student accesses needed information effectively and efficiently.

Now it is your turn…

- See page 7 for a goal write up with linkages up to institutional strategic goals and downward to the objectives

- See pages 8 – 11 for an objective write up

- See page 11 for a few other examples of goals and objectives

- See page 12 for blank goal worksheet

- See page 13 for blank objective worksheet

- See pages 15-16 for definitions and Websites