

# Assessing the minor programs

**Minors and Secondary Majors** **KSTATE**  
Kansas State University

Today's Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Effective Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Name: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
Last First Mi. Student I.D.

**Add:** \_\_\_\_\_ in \_\_\_\_\_  
Minor Name Secondary Major Name College

\_\_\_\_\_  
(Add) Program Director Approval

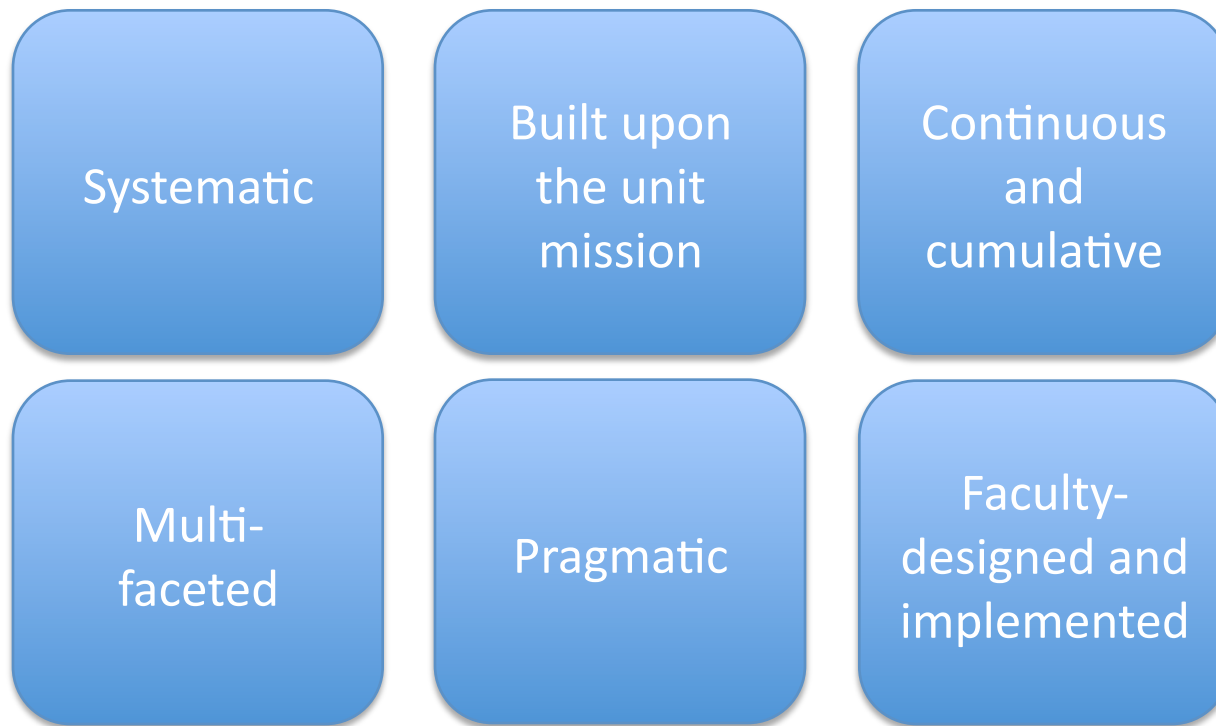
**Dr. Chris Little**

Plant Pathology Minor Coordinator

Dept. Plant Pathology, College of Agriculture

# Assessment

- **Assessment** is the systematic collection and analysis of information to improve student learning.
- **Effective** program assessment:



# Outline

- **Strategies\*** for assessment of minor programs:
  - (1) Assess no more than **two SLOs** (if practical);
  - (2) **Quantitatively** assess large student populations and **qualitatively** assess the minor subset;
  - (3) Create a “**class content improvement feedback loop**” using quantitative survey and qualitative capstone course assessments.

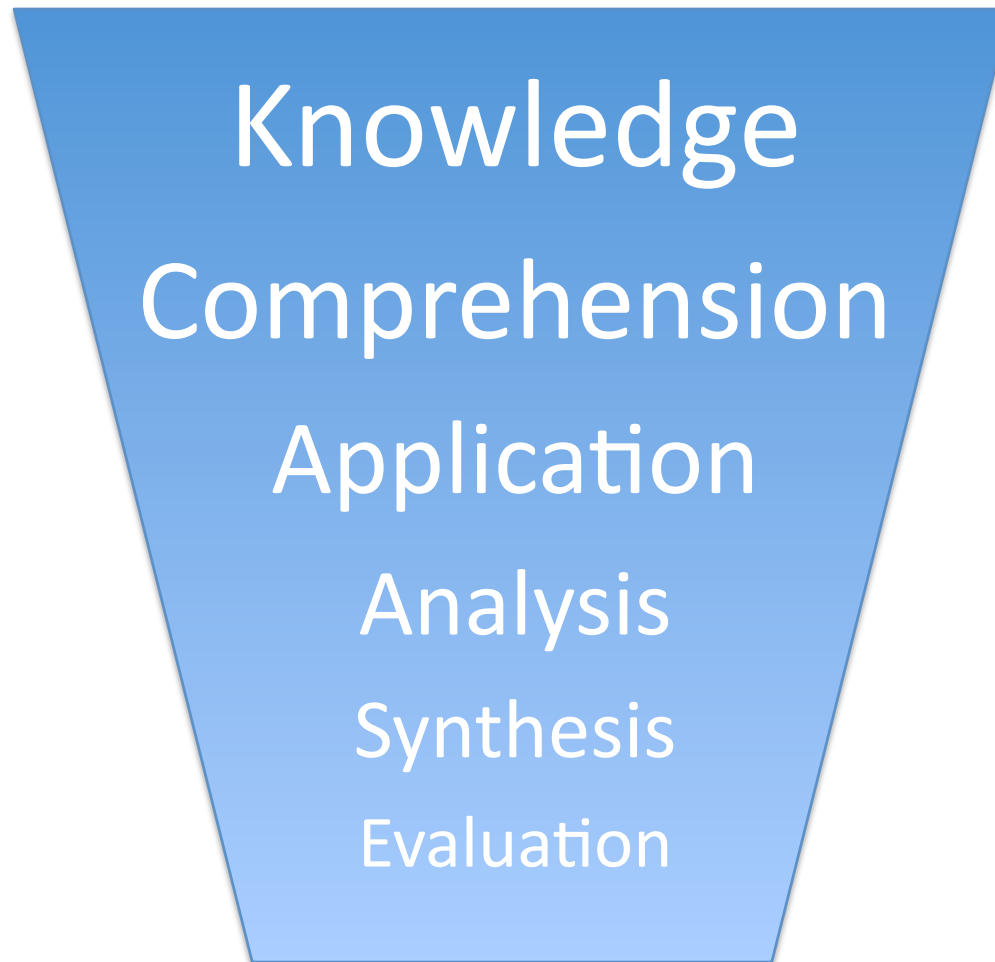
*\*DISCLAIMER: These are the strategies that have been adopted for the Plant Pathology Minor program -- one size doesn't necessarily fit all. We're still figuring it out, too.*

# What can you assess?

<b>Student Learning</b>	Knowledge of the discipline.	Skills	Values
<b>Student Attitudes and Perceptions</b>	Advising Campus facilities Course schedules Grad school prep	Curriculum Mentoring Teaching	Campus climate Co-curricular Student services
<b>Unit/University Processes</b>	Advising Library services IT services Student orientations	Counseling Ombudsmanship Financial aid Transcripts	Graduation checks Tutoring Health care



# Bloom's Taxonomy



# Assessment Practices

- **Direct methods**

- Requires students to display their knowledge and skills as they respond to the assessment instrument.
- Objective tests, essays, presentations, etc.

- **Indirect methods**

- Requires students to reflect in their learning rather than demonstrate it.
- Surveys, exit interviews, etc.

# (1) Limit SLOs for minor programs

- **Two “degree program” SLOs:**
  - **Quantitative** assessment (metric 1) = Direct method
  - **Qualitative** exit interview (metric 2) = Indirect method
  - Additional SLOs should be added if certification or other special requirements are associated with the minor or secondary degree program.
- **University SLOs:**
  - **Knowledge, Critical Thinking**, Communication, Diversity, Academic and Professional Integrity

*Fit into the **alignment matrix**.*

**Alignment Matrix** – For each stated student learning outcome, where does the student have the opportunity to learn the outcome and where is student achievement of the outcome is assessed?

Place an “X” for courses or experiences in which students have the opportunity to learn the outcome.

Place an “A” for courses or experiences in which student performance is used for program level assessment of the outcome.

SLO/Required Courses/experiences		PLPTH 500 Principles of Plant Pathology	PLPTH 585 Crop Diseases	PLPTH 590 Landscape/Turf Diseases	Metric
<b>Degree program SLOs</b>					
Critical Knowledge Areas	<b>SLO1:</b> Students who earn the plant pathology minor will possess a basic understanding of plant diseases, their causes, effects, and controls.	A	A	A	Quantitative Survey
	<b>SLO2:</b> Students who earn the plant pathology minor will integrate plant pathology principles into the understanding of their major discipline(s) through the study of agronomic diseases, horticultural diseases, turf diseases, entomology, applied microbiology, biotechnology and other relevant career fields.	X	X	X	Exit Interview
Integration					
<b>University SLOs</b>					
Assessed in Student's Major Program	Knowledge	X	X	X	Assessed in Student's Minor Program
	Critical thinking	X	X	X	
	Communication				
	Diversity				
	Academic and professional integrity				

## (2) Use **Quantitative** and **qualitative** assessments

- **Metrics:**

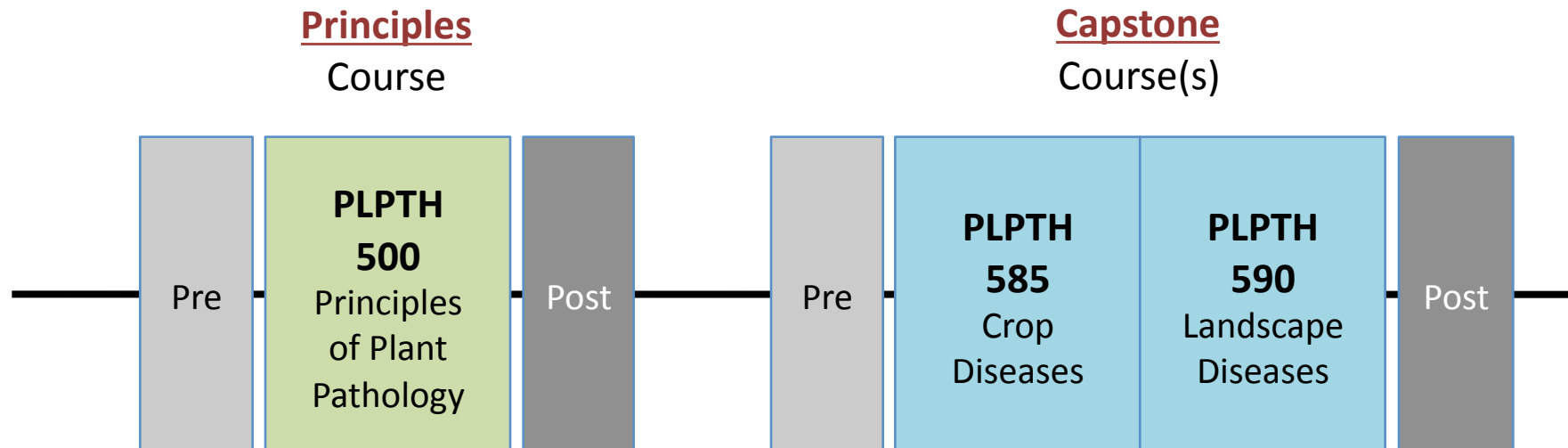
- **Quantitative surveys**

- Pre-class surveys (“pre-test”)
      - Post-class surveys (“post-test”)
- Assess **Critical Knowledge Areas** in **Principles and Capstone** Courses

- **Exit interviews**

- Questions about the student’s learning process(es) and experience (not the critical knowledge areas, themselves).
    - We’re still working on this part. Won’t discuss today.

# Quantitative Assessment of Critical Knowledge Areas



## **Required Core Courses (5 credit hours):**

<b><u>Principles</u></b> Course	PLPTH 500	Principles of Plant Pathology (3 credit hours)
	<b>and</b>	
<b><u>Capstone</u></b> Course(s)*	PLPTH 585	Crop Diseases (2 credit hours) <b>or</b>
	PLPTH 590	Landscape Diseases (2 credit hours)

*\*May be a “capstone experience” or other activity that precedes student matriculation.*

# Levels of quantitative assessment

## 1. Whole class

- a. Principles course
- b. Capstone course

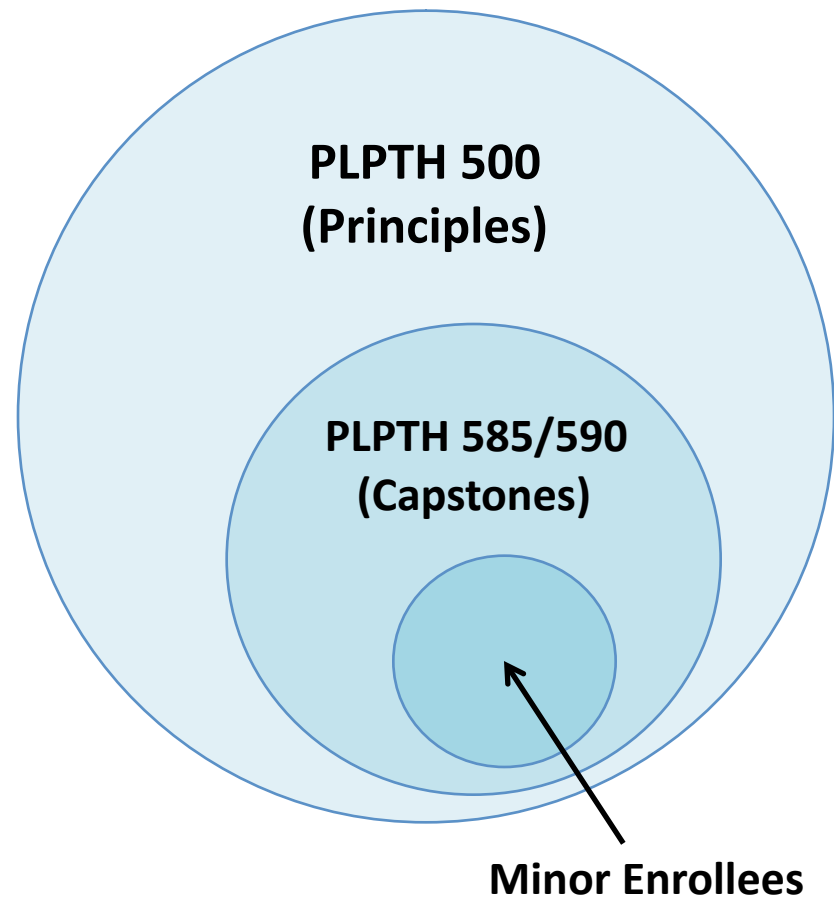
## 2. Cohort

- a. Minor enrollees.

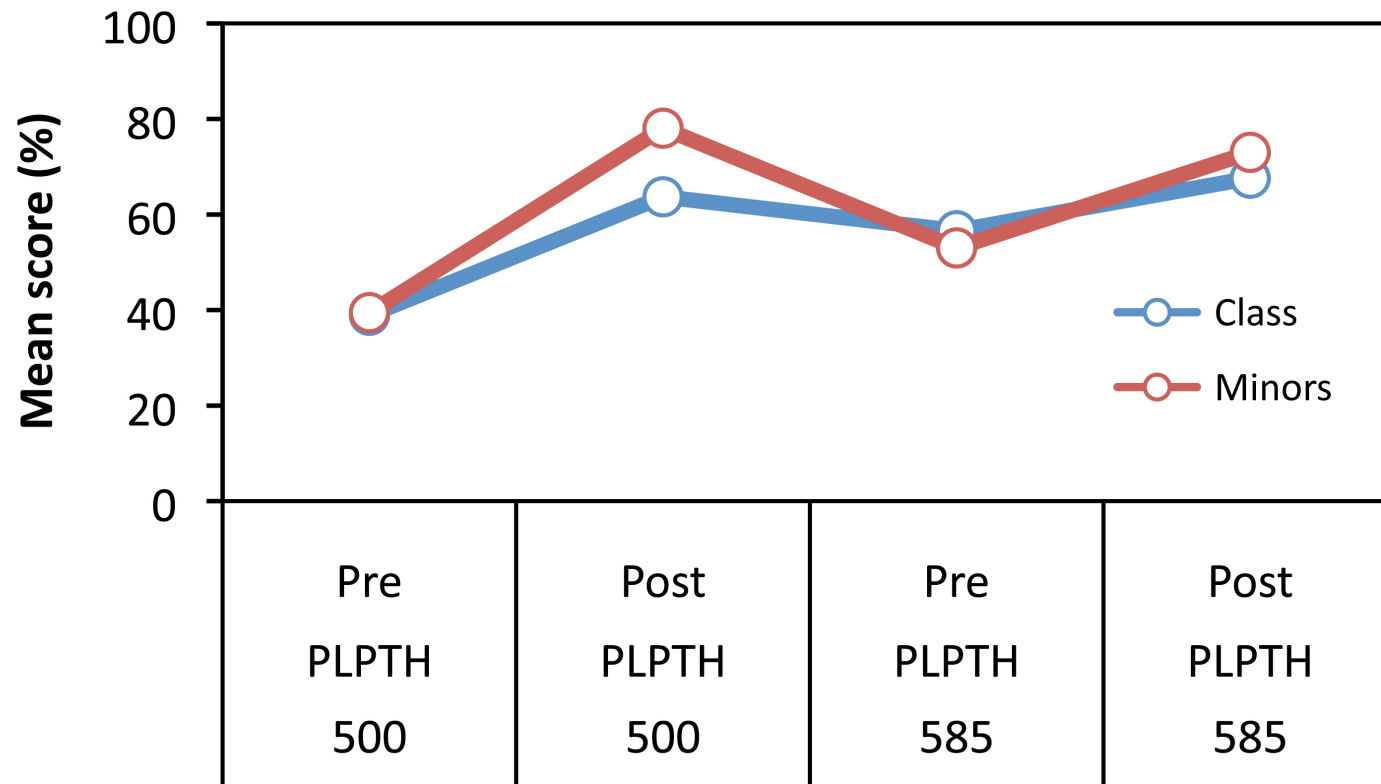
## 3. Individual

## (4.) Temporal

- 1. “Pre-Post, Pre-Post”

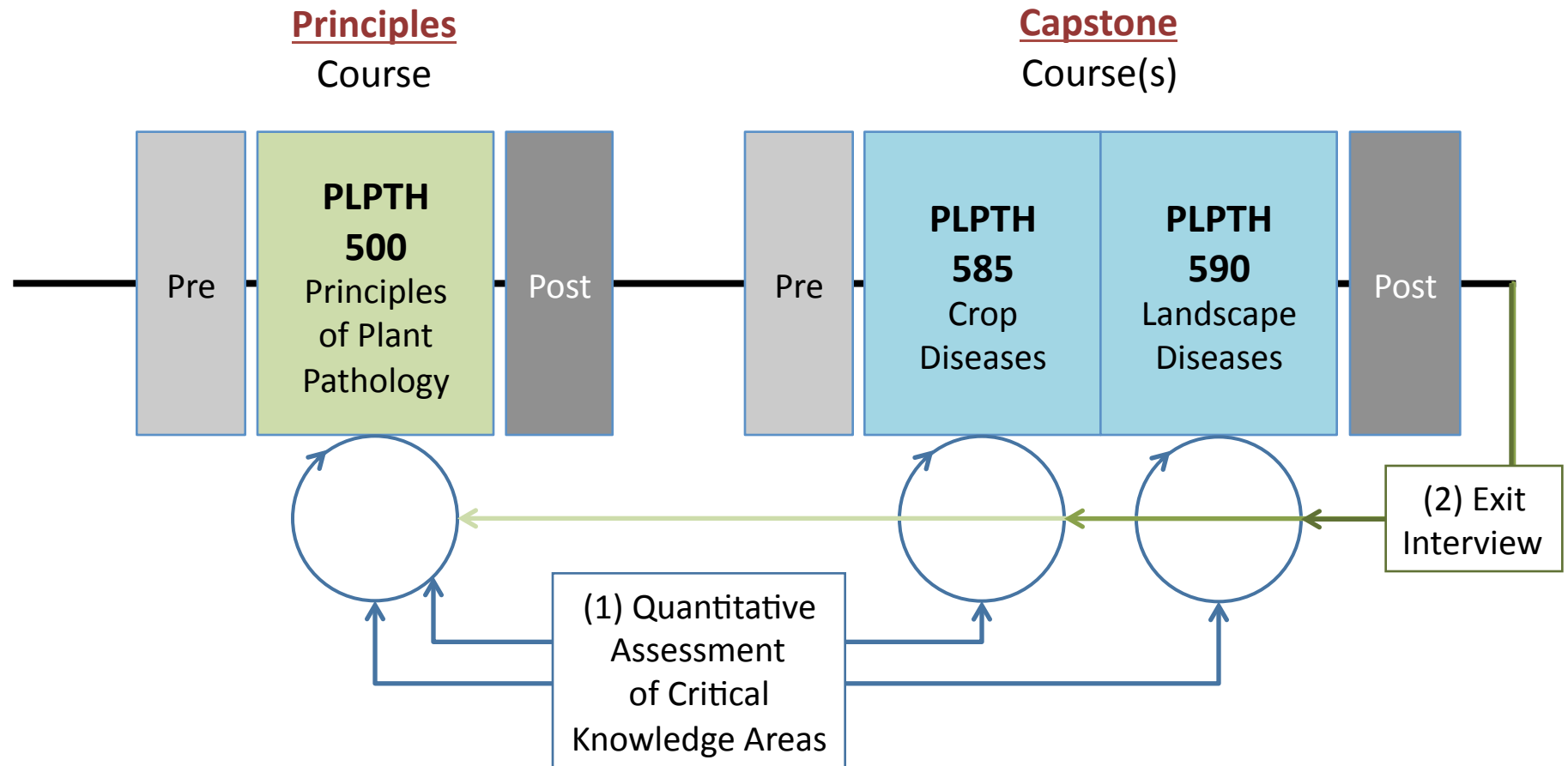


## Pre- and post-test scores for principles and capstone course series.





### (3) “Class content improvement feedback loop”

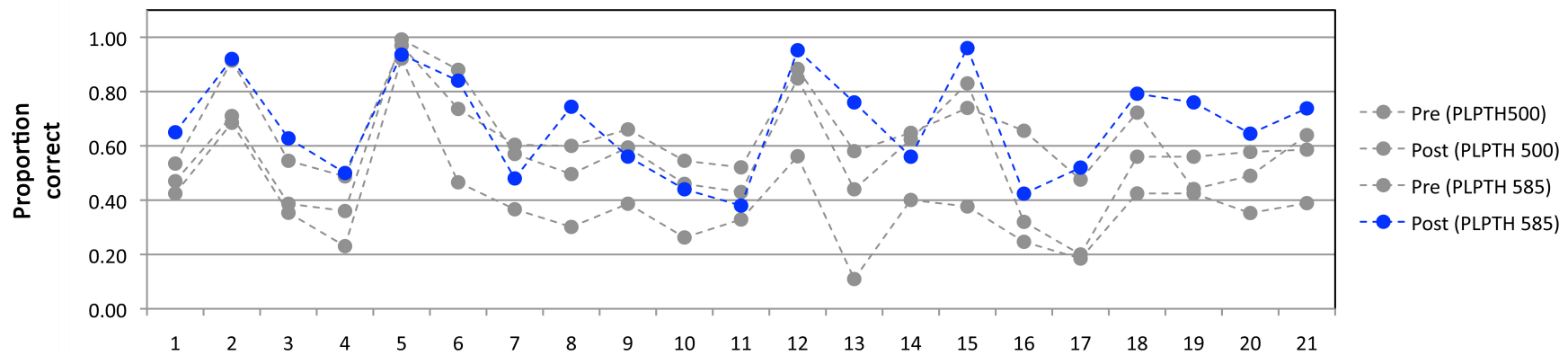
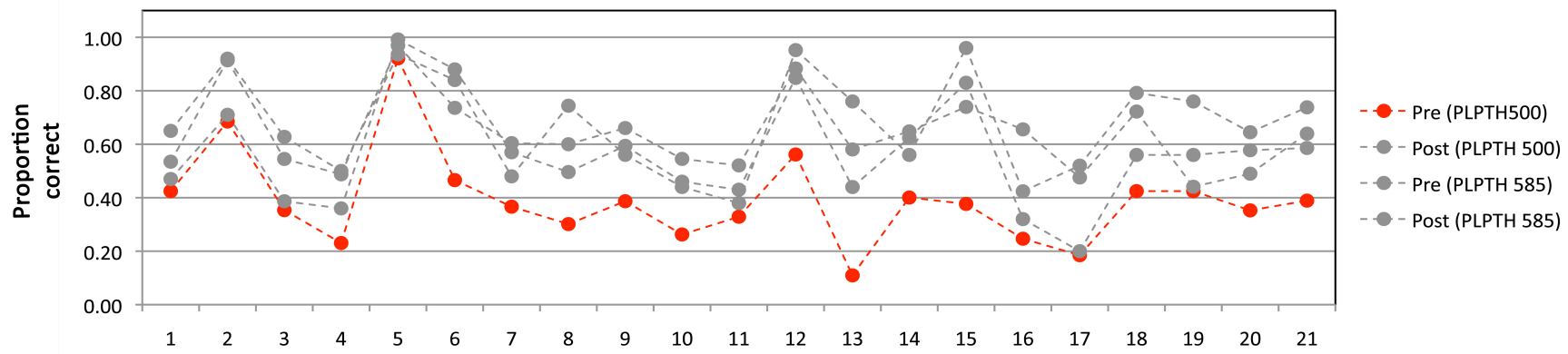
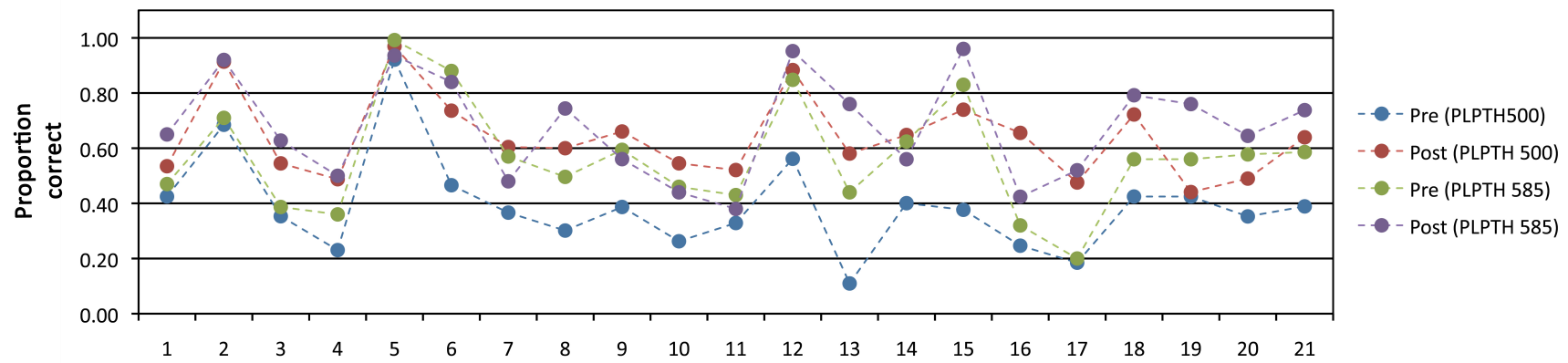


*Program improvement is **multidirectional**.*

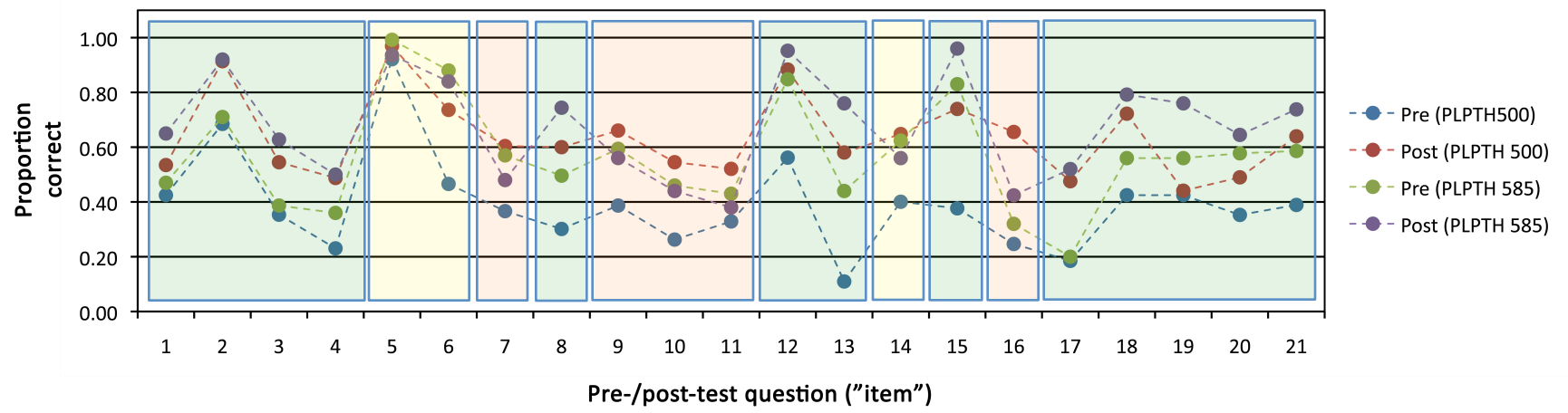
## Pre-/Post-test Items (aka. Critical Knowledge Areas)

- |  |  |
|--|--|
| (1) Definition of plant disease                      | (16) Polycyclic diseases                 |
| (2) Plant disease triangle                           | (17) Horizontal resistance               |
| (3) Plant disease symptoms                           | (18) Gene-for-gene concept               |
| (4) Plant disease signs                              | (19) Plant virus genomes                 |
| (5) Biotic versus abiotic                            | (20) Plant disease management strategies |
| (6) Relative size of plant pathogens                 | (21) Causal agents of Kansas diseases    |
| (7) Fungal infection of plants                       |  |
| (8) Definition of a haustorium                       |  |
| (9) Bacterial infection of plants                    |  |
| (10) Viral infection of plants                       |  |
| (11) Nematode infection of plants                    |  |
| (12) Dissemination of bacterial and fungal pathogens |  |
| (13) Primary inoculum                                |  |
| (14) Overseasoning of bacterial and fungal pathogens |  |
| (15) Obligate biotrophs                              |  |

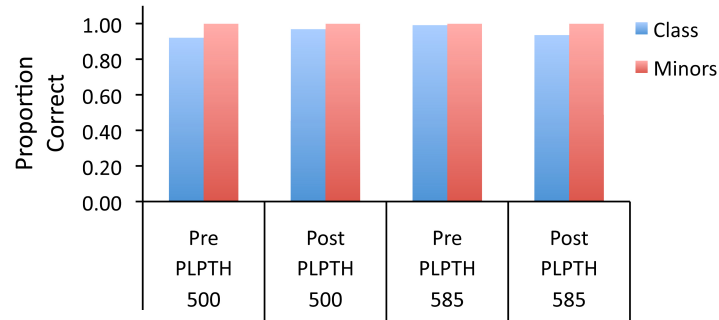
What are the  
**CKAs** for your  
discipline?



Pre-/post-test question ("item")



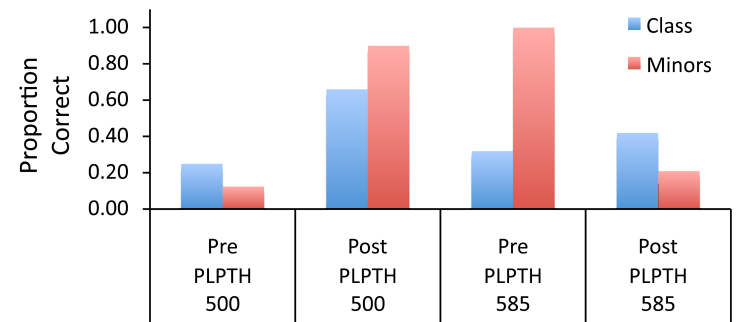
Same  
#5



Better,  
#20



Worse,  
#16



## Summary: How do you link assessment outcomes, methods, and results?

Program Objective	Outcome Criteria	Assessment Measure	Population	Use
Cognitive Knowledge (eg. <b>CKAs</b> )	Students demonstrate mastery of basic knowledge	Quantitative assessments (pre-/post-class surveys)	Students enrolled in courses (principles and capstone(s))	Assessment reports; “class content improvement feedback loop”
Student Perceptions ( <b>Integration</b> )	Student understand the goals and objectives of their program; career goals	Qualitative assessments (exit interviews)	Minor enrollees	Assessment reports; unit review; “class content improvement feedback loop”

# For more information

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**Thanks!**