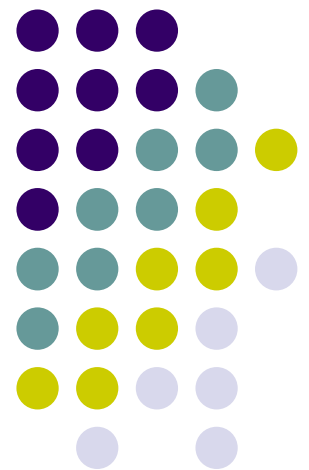


Developing Meaningful, Measurable Student Learning Outcomes

Tulsa Community College
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Student Learning Outcomes



What do you want students to know,
do, or achieve

... At the end of the course

....At the end of the program

Student Learning Outcomes



Define your course, program, and institution's values.

PRACTICAL ADVICE:



If you don't care about the outcome, you're not going to care whether students are achieving it either.

Student Learning Outcomes



- Students should be able to critically comprehend, interpret, and evaluate written, visual, and aural material.

Student Learning Outcomes



- Students will recognize, analyze, and interpret human experience in terms of personal, intellectual, and social contexts.

PRACTICAL ADVICE:



The more complex the
outcome, the harder it will
be to assess

PRACTICAL ADVICE:



- Format for learning outcomes:

Students **will be able to**

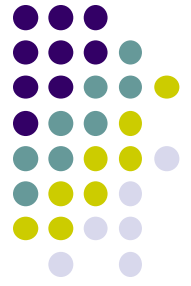
<<action verb>> <<something>>

PRACTICAL ADVICE:



- Use whatever language on which you can agree.

Student Learning Outcomes



- Learner Centered
- Specific
- Action oriented
- Public
- Distinctive
- Frame Perceptions
- Cognitively appropriate

KNOWLEDGE	COMPREHENSION	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
	Associate				
Cite	Classify	Apply	Analyze	Arrange	Appraise
Count	Compare	Calculate	Appraise	Assemble	Assess
Define	Compute	Classify	Calculate	Collect	Choose
Draw	Contrast	Demonstrate	Categorize	Compose	Compare
Identify	Differentiate	Determine	Classify	Construct	Criticize
List	Discuss	Dramatize	Compare	Create	Determine
Name	Distinguish	Employ	Debate	Design	Estimate
Point	Estimate	Examine	Diagram	Formulate	Evaluate
Quote	Explain	Illustrate	Differentiate	Integrate	Grade
Read	Express	Interpret	Distinguish	Manage	Judge
Recite	Extrapolate	Locate	Examine	Organize	Measure
Record	Interpolate	Operate	Experiment	Plan	Rank
Repeat	Locate	Order	Inspect	Prepare	Rate
Select	Predict	Practice	Inventory	Prescribe	Recommend
State	Report	Report	Question	Produce	Revise
Tabulate	Restate	Restructure	Separate	Propose	Score
Tell	Review	Schedule	Summarize	Specify	Select
Trace	Tell	Sketch	Test	Synthesize	Standardize
Underline	Translate	Solve		Write	Test
		Translate			Validate
		Use			
		Write			

COMPREHENSION		ANALYSIS		EVALUATION	
KNOWLEDGE	APPLICATION	SYNTHESIS			
	Associate			Arrange	Appraise
Cite	Classify	Apply	Analyze	Assemble	Assess
Count	Compare	Calculate	Appraise	Collect	Choose
Define	Compute	Classify	Calculate	Compose	Compare
Draw	Contrast	Demonstrate	Categorize	Construct	Criticize
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Name	Distinguish	Employ	Debate	Formulate	Evaluate
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Quote	Explain	Illustrate	Differentiate	Manage	Judge
Read	Express	Interpret	Distinguish	Organize	Measure
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Record	Interpolate	Operate	Experiment	Prepare	Rate
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Trace	Tell	Sketch	Test	Write	Test
Underline	Translate	Solve			Validate
		Translate			
		Use			
		Write			

Student Learning Outcomes



- Students will be able to describe, analyze and interpret.....



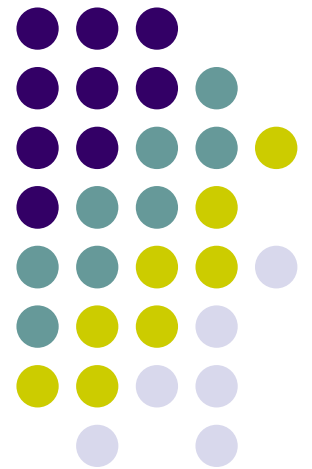
Student Learning Outcomes



- **RULE OF THUMB:**

If you have more than one action verb,
keep the one that represents the
highest order of thinking.

Outcomes must be
defined

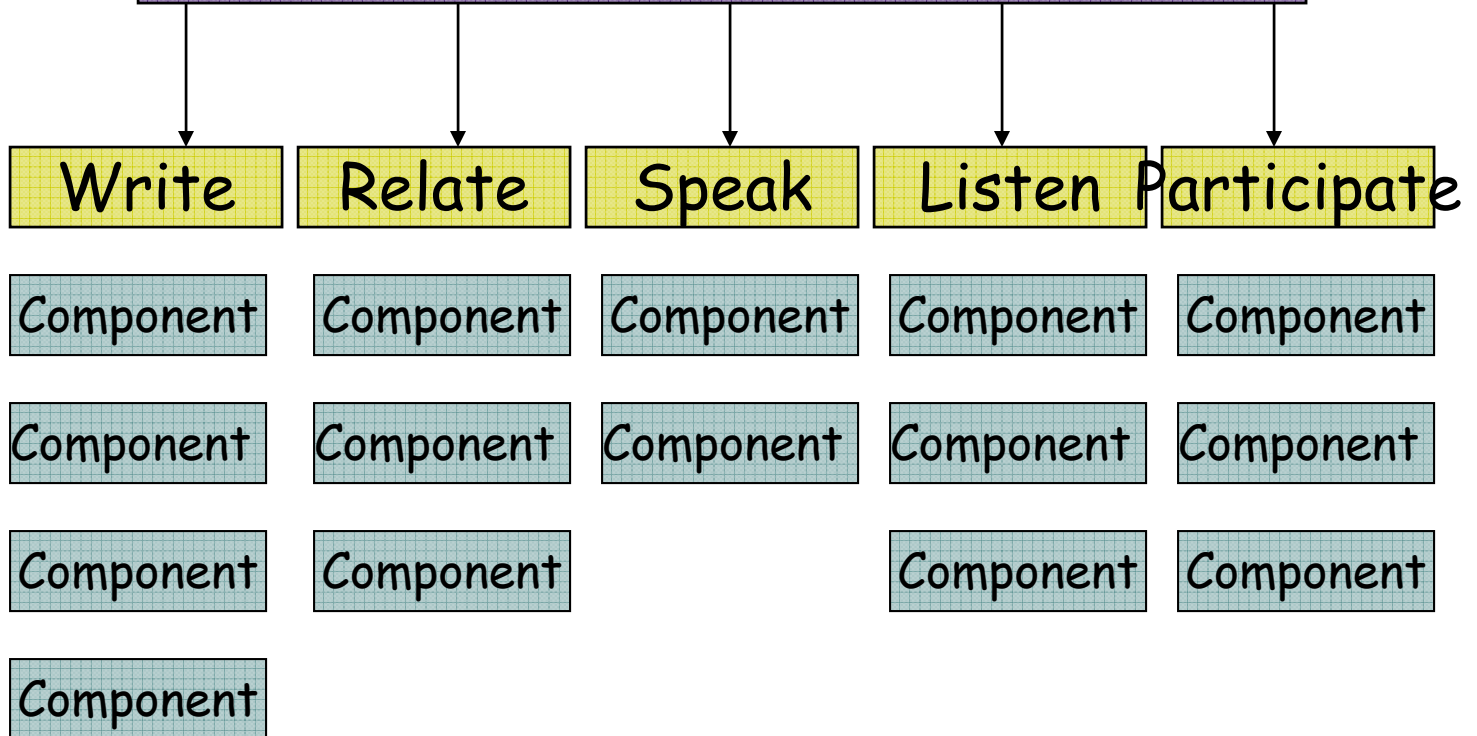




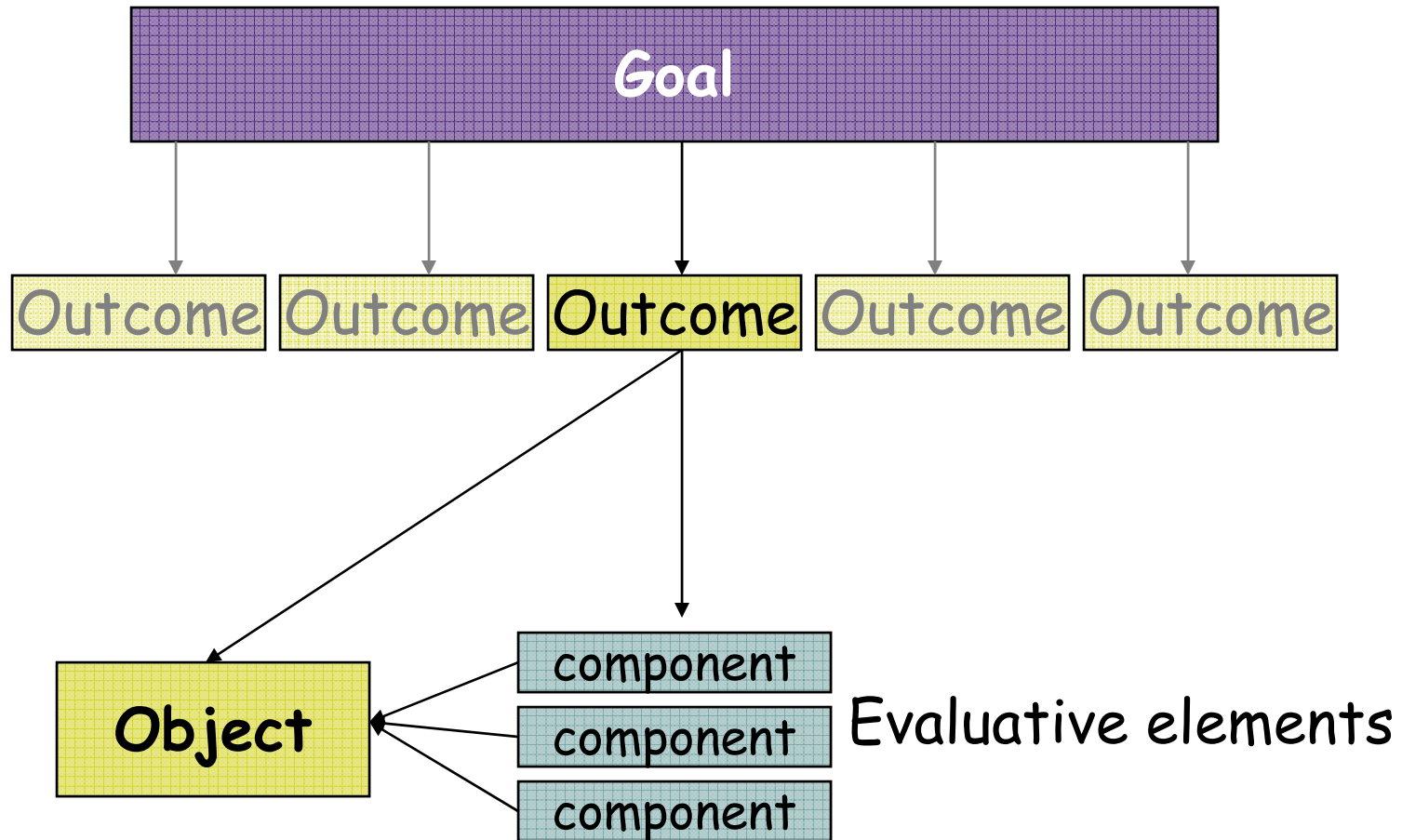
Components

- Define student learning outcomes
- Provide a common language for describing student learning
- Must be *outcome specific*
- Must be shared across faculty
- Number of components will vary by outcome

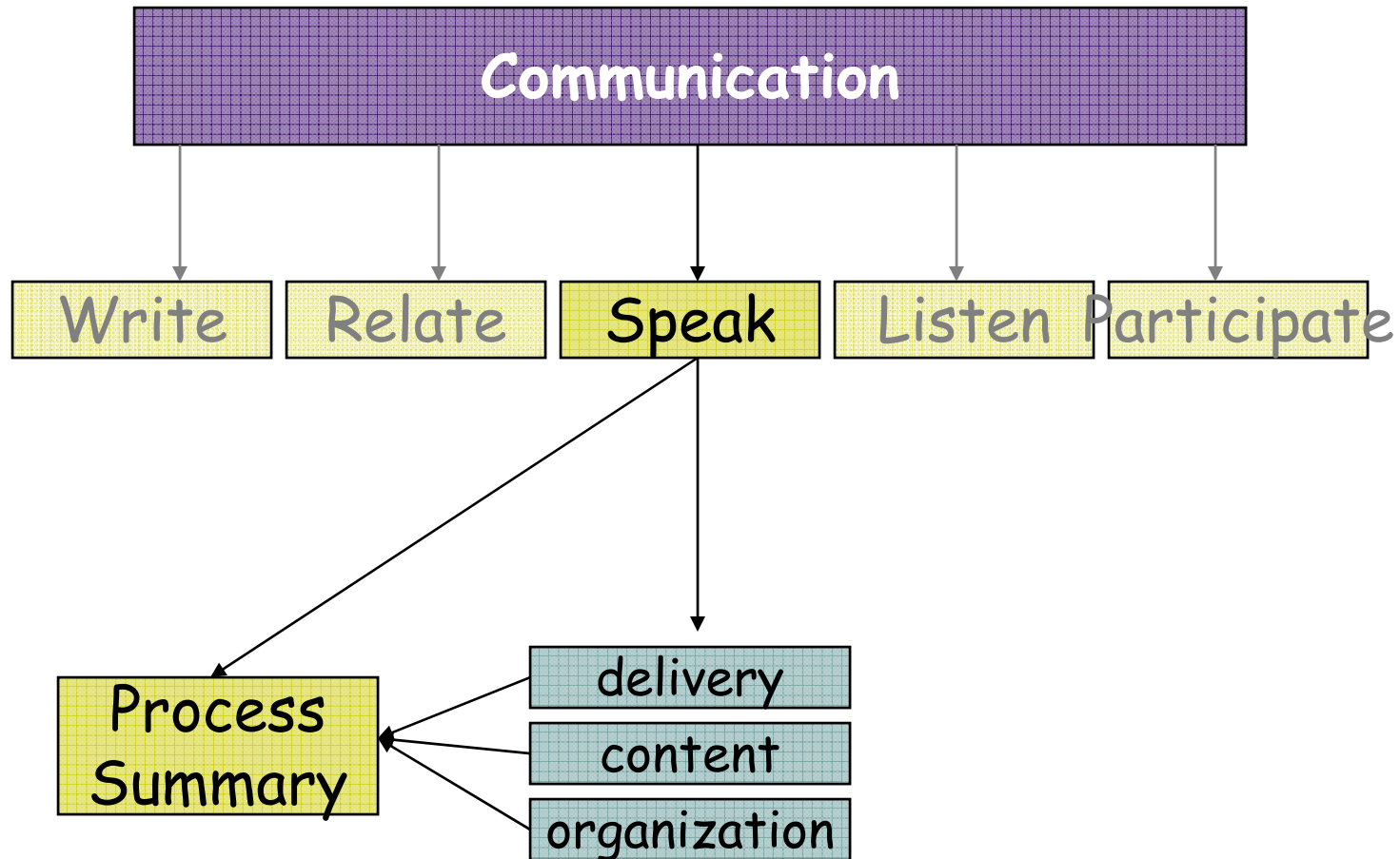
Communication



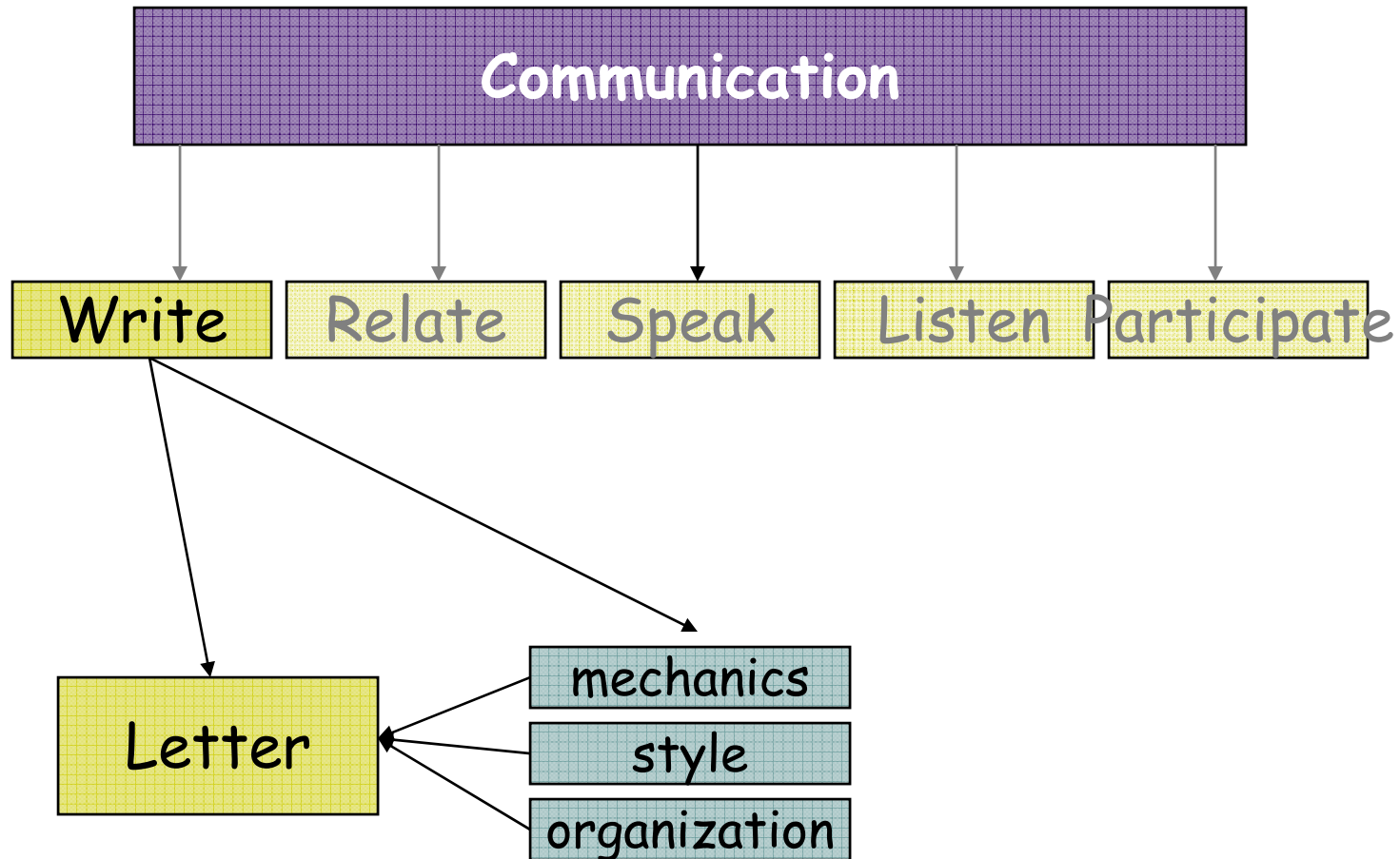
Components



Components



Components



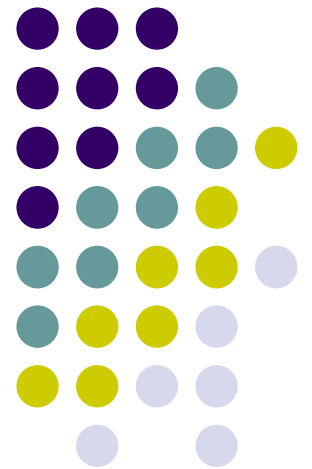
PRACTICAL ADVICE:

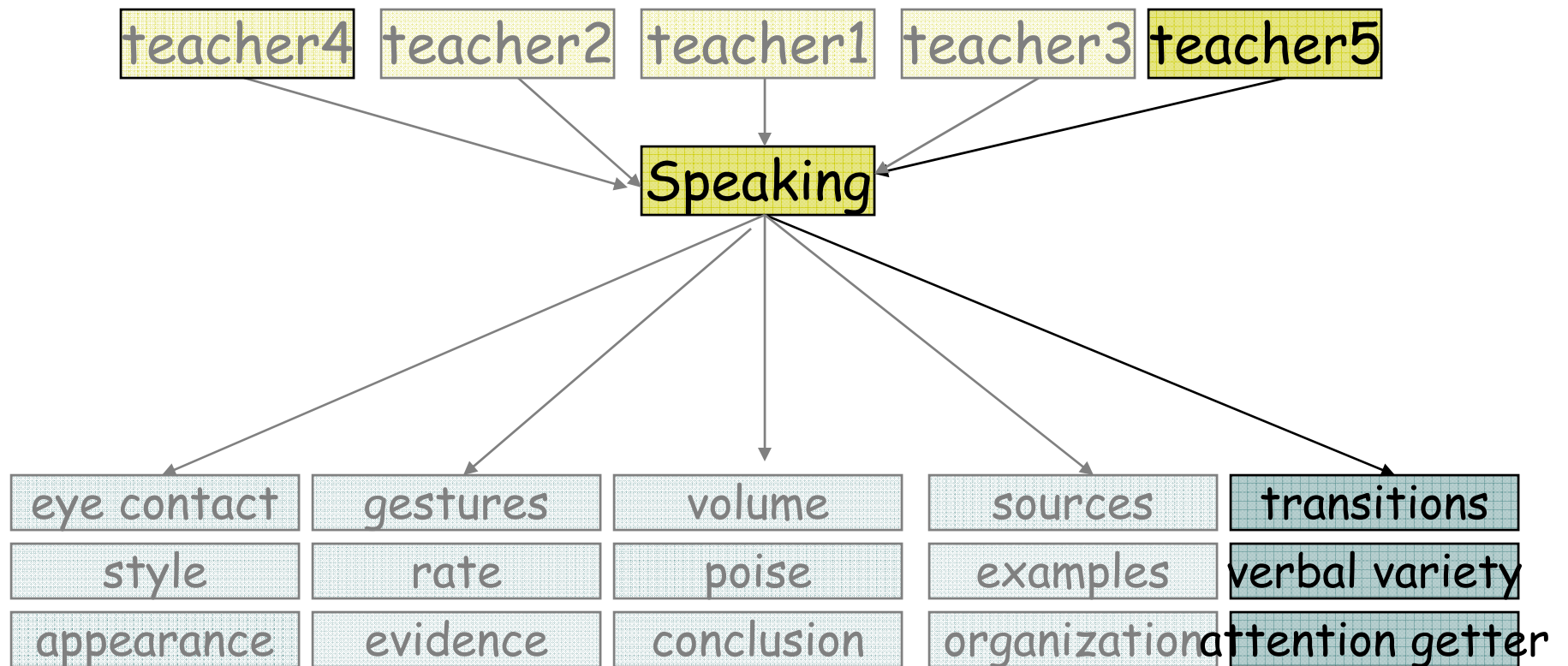


- If you can't identify components for your outcomes, you need to rethink your outcomes.

The Reality of Assessing Student Learning Outcomes

Why you need common
definitions



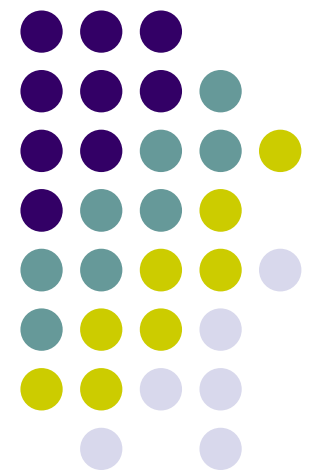




Can our students deliver an effective Public Speech?

eye contact	gestures	volume	sources	transitions	
style	rate	poise		examples	verbal variety
appearance	evidence	conclusion		organizational	attention getter

Quiz



Example #1



Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected

Example #2



Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines (one of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty)

Example #2



Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines (one of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty)

BETTER: Students will be able to test hypotheses.

COMPONENTS

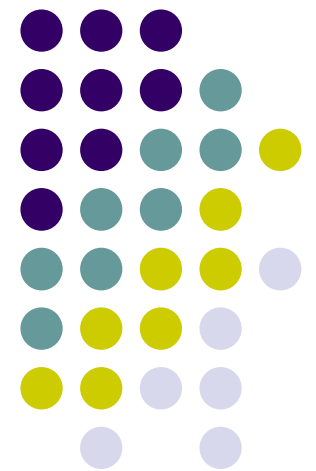
Data collection

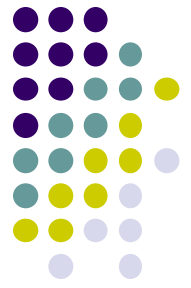
Statistical Analysis

Graphical Analysis

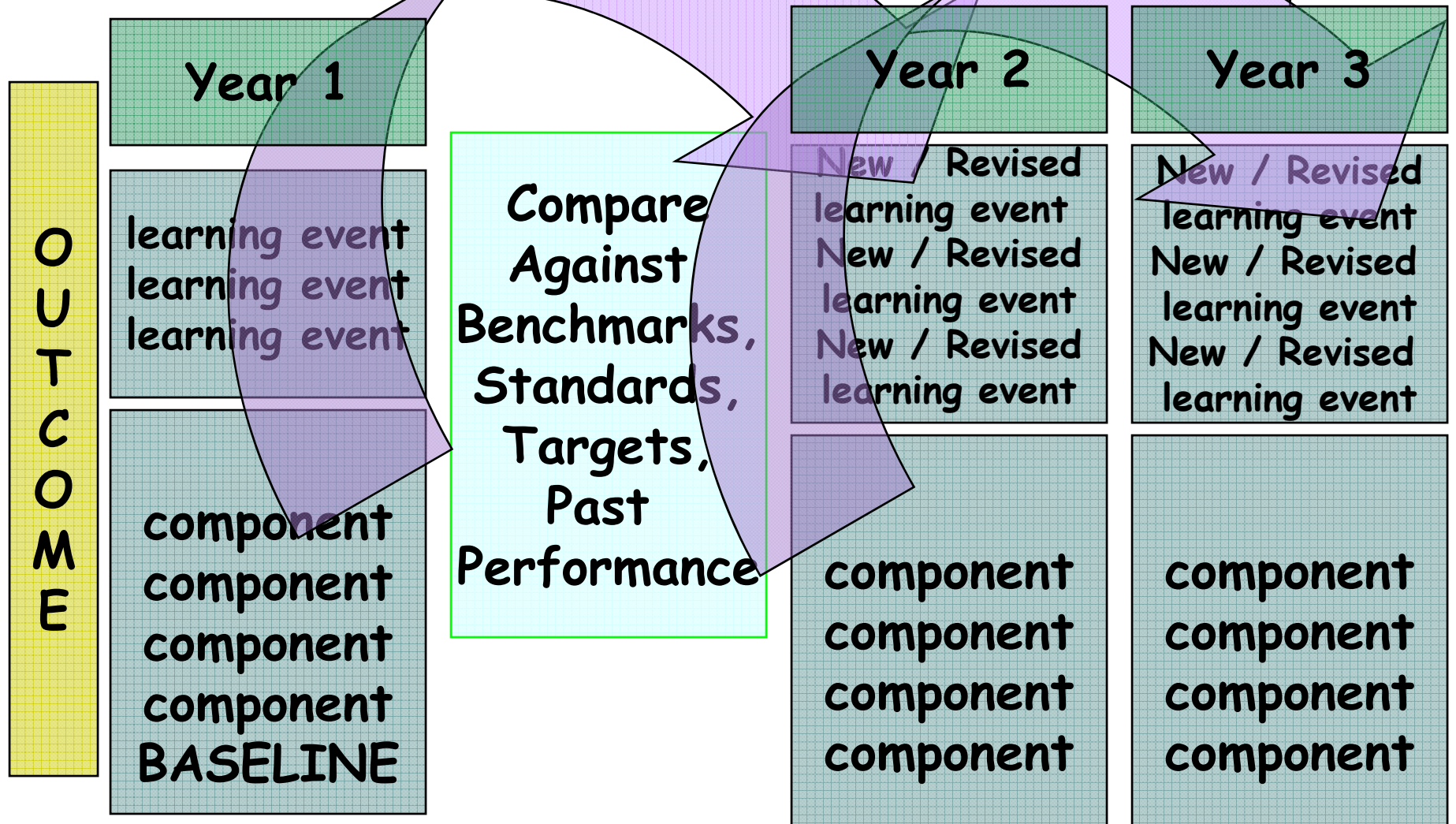
Identification of sources of error

Looking Ahead

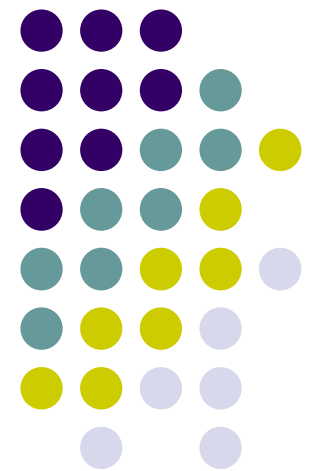




How Assessment Works



Next Steps



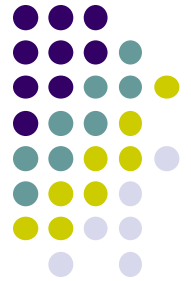
Next Steps



By February 1st: Define, or Re-Define
Outcomes: What did you learn from this last
cycle?

After that....

√ Map outcomes to the assignments and curriculum



Student Learning Outcomes

1xx 1xx 1xx 1xx 2xx 2xx 2xx 2xx 2xx 2xx



1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Student Learning Outcomes

1xx 1xx 1xx 1xx 2xx 2xx 2xx 2xx 2xx 2xx

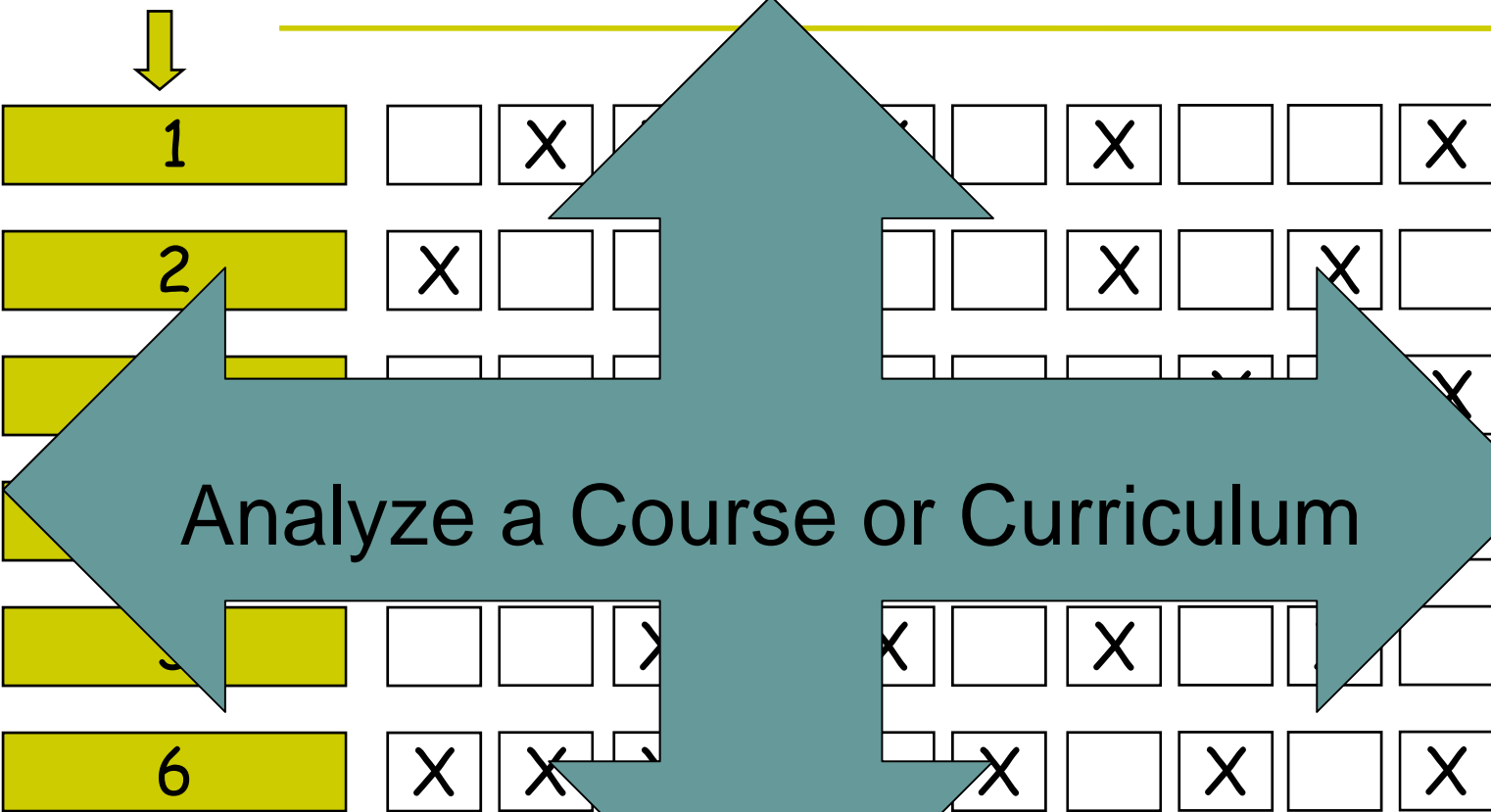


1		X	X		X		X			X
2	X						X		X	
3				X				X		X
4										
5			X		X		X		X	
6	X	X	X	X		X		X		X

Build a Course or Curriculum

Student Learning Outcomes

1xx 1xx 1xx 1xx 2xx 2xx 2xx 2xx 2xx 2xx



1		X				X			X
2	X					X		X	
									X
			X		X	X			
6	X	X			X		X		X

Student Learning Outcomes

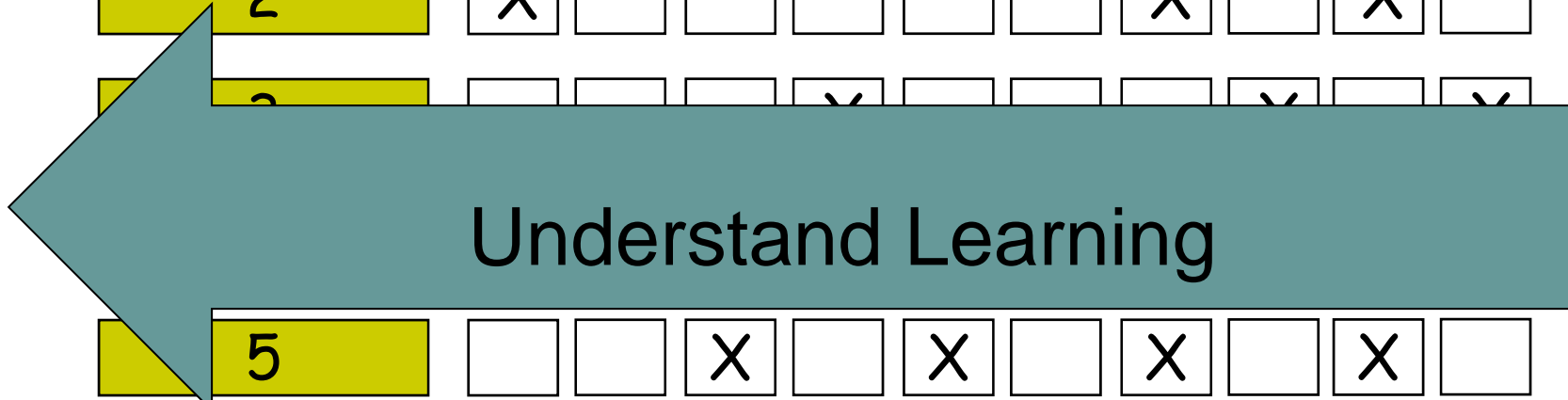
1xx 1xx 1xx 1xx 2xx 2xx 2xx 2xx 2xx 2xx



1		X	X		X		X			X
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2	X						X		X	
---	---	--	--	--	--	--	---	--	---	--

3				X				X		X
---	--	--	--	---	--	--	--	---	--	---



5			X		X		X		X	
---	--	--	---	--	---	--	---	--	---	--

6	X	X	X	X		X		X		X
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After that....

- √ Map outcomes to the assignments and curriculum
- √ Identify ways to assess the outcomes
- √ Discover trends in results
- √ Reaffirm what is working
- √ Adjust processes to improve learning

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