



## **Using Assessment to Drive Improvement Without Driving Faculty Crazy**

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### **Introduction**

- ✓ Context for program assessment
- ✓ Statement of the problem
- ✓ Faculty types
- ✓ Working in an environment of Resistance
- ✓ Common Mistakes
- ✓ Things I wish I had known

<b>Input</b>	<b>Processes</b>	<b>Outputs</b>	<b>Outcomes</b>
Student Background	Programs & services offered; populations served	Student grades; graduation rates; employment statistics	Student learning, skills, attitudes
Faculty Background	Faculty teaching loads/class size	Credit hours delivered, faculty development activities; publication numbers	Faculty publication citations data; faculty devlpmt
Educational Resources	Policies, procedures, governance	Statistics on resource availability, participation rates	Student learning and growth

<b>Input</b>	<b>Processes</b>
Student Background	Programs & services offered; populations served
Faculty Background	Teaching loads/class size; support services
Educational Resources	Policies, procedures, governance

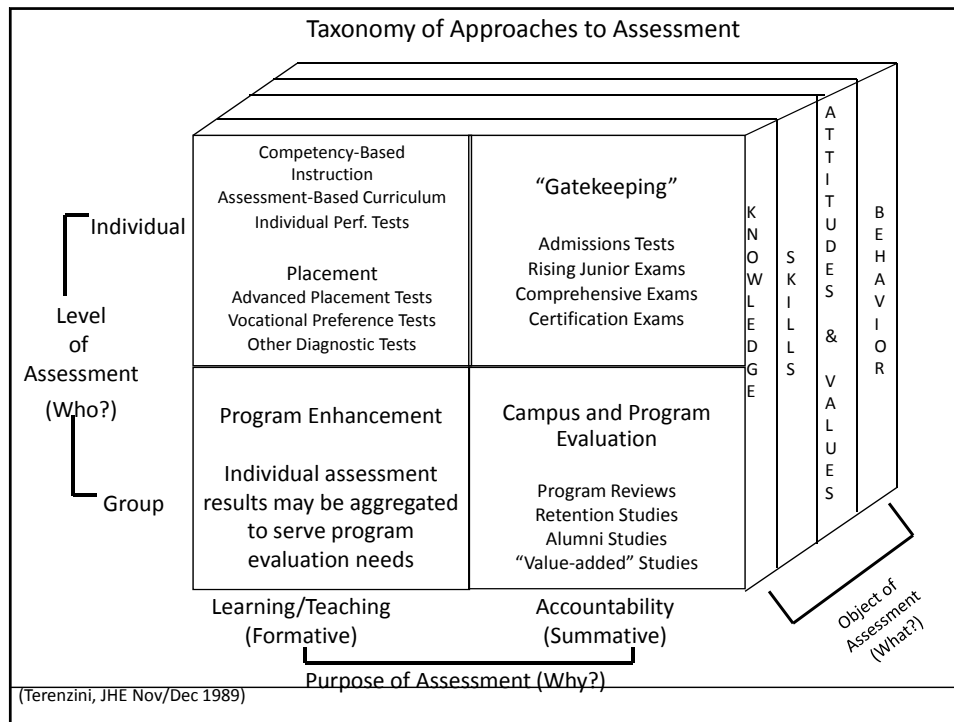
✓ Assessment of inputs and process only establishes the capability or capacity of a program (how many courses and what is “covered”, background of faculty, nature of facilities, etc.)

✓ Assessment of outputs serve as indirect measures or proxies for effectiveness—they provide general indicators of achievement.

<b>Outputs</b>
Student grades; graduation rates; employment statistics
Credit hours delivered; faculty development activities; publication numbers
Statistics on resource availability, participation rates

✓ Assessment of outcomes provides for direct measures of the effectiveness of what has been done with that capability/ capacity related to individual learning and growth.

<b>Outcomes</b>
Student learning, skills, attitudes
Teaching effectiveness; faculty development; research productivity; publications citations
Student learning and growth



## Statement of the Problem

- Moving the institution/program from one that values inputs, processes and outputs to one that also values evidence of outcomes requires a change in how we view the quality of student learning
- Understanding of differences between classroom assessment of learning and program assessment of learning which is not well understood

## Explore our beliefs about “faculty”

- What do we know about faculty?
  - One word descriptors
- Our beliefs about faculty can influence and hamper how we perceive new information
- Existing stereotypes give rise to limited or biased discourses and expectations

## There is no such thing as A “faculty type”

- Faculty Types\*
  - Ostrich
  - Freedom defender
  - CAVE dwellers
  - Passive-aggressive
  - Innovators

\*Dowe, Ronald, Mary Mahony, and Marjorie Olive, “Teaching Reconnections: Assessment-Driven Institutional Renewal,” NCA 2000 105<sup>TH</sup> Annual Meeting, Chicago, Illinois, Session 174, April 1-4, 2000

### Nature of resistance to engaging in program assessment

- Motivation to participate is highly personal—each individual sees it in terms of how it affects him/her and work
- People always resist things that they perceive not to be in their best interests.
- Resistance is an expression of power — the ability to not get what you don't want.

### Levels of Resistance

1. Need for additional information  
“I just need to clarify some things so I have a better picture of what's happening.”
2. Emotional attachment to current situation  
“I have too much at stake to buy in.”
3. Values-based attachment to current situation  
“This is in total conflict with my beliefs about how an organization should be run.”

### Ways to Successfully Roll Out Change

- Communicate, communicate, communicate
  - Make it clear what that “future state” looks like
  - Explicitly define what you are asking for, who will be involved, how it will be done and what’s in it for me?
  - What, who, how, WIIFM
- Use storytelling/narrative of other successful programs to help demonstrate that it can be done (vision of success)

### Ways to Successfully Roll Out Change

- Involve everyone, especially the resisters
- Use inclusive language.
- Think of faculty (other?) needs, often disguised as resistance or emotional rejection.
- Set **guide posts** for others to follow, without telling others “how” to do it.
- What kinds of support (interventions) might enable a person to move to the next level?

- Make it clear what that “future state” looks like
- Explicitly define what you are asking for, who will be involved, how it will be done and what’s in it for me?



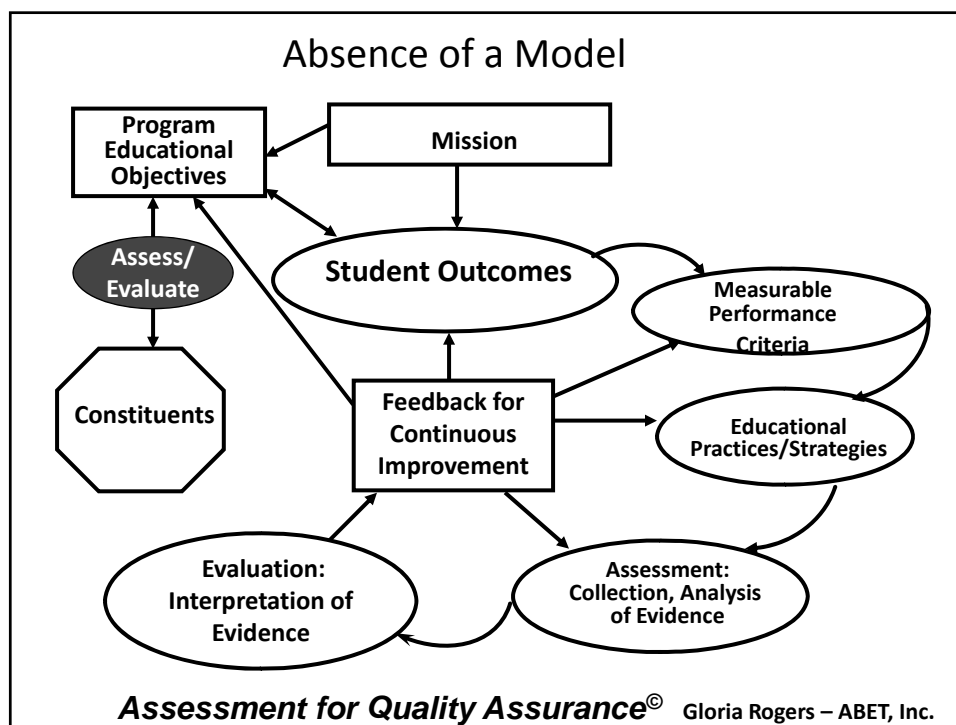
It is hard to lead a cavalry charge if you think you look funny on a horse.

Adlai Stevenson

## Common Mistakes

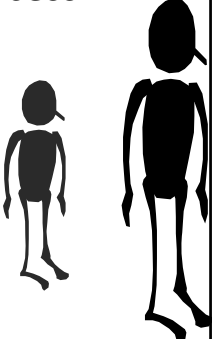
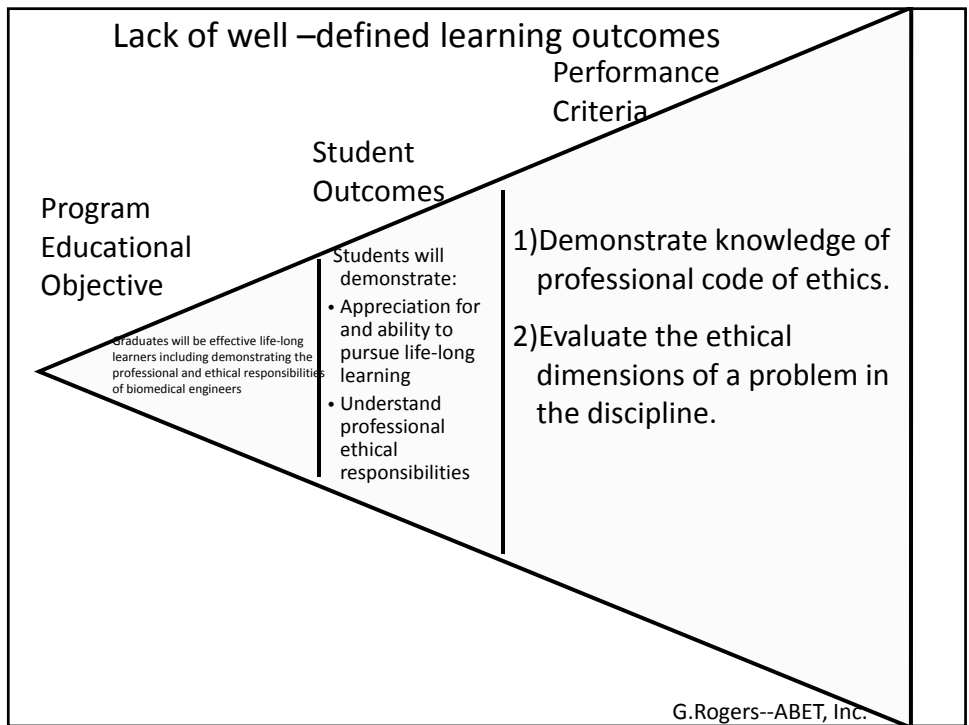
- Lack of common language
- Absence of a “model” for the overall plan
  - Lots of “parts and pieces” that need to be aligned
- Lack of understanding of differences between classroom assessment and program assessment
- Lack of well-defined program-level learning outcomes
- Lack of alignment between stated outcomes and learning strategies
- Lack of understanding of difference between direct and indirect assessment methods
- Lack of systematic, efficient processes

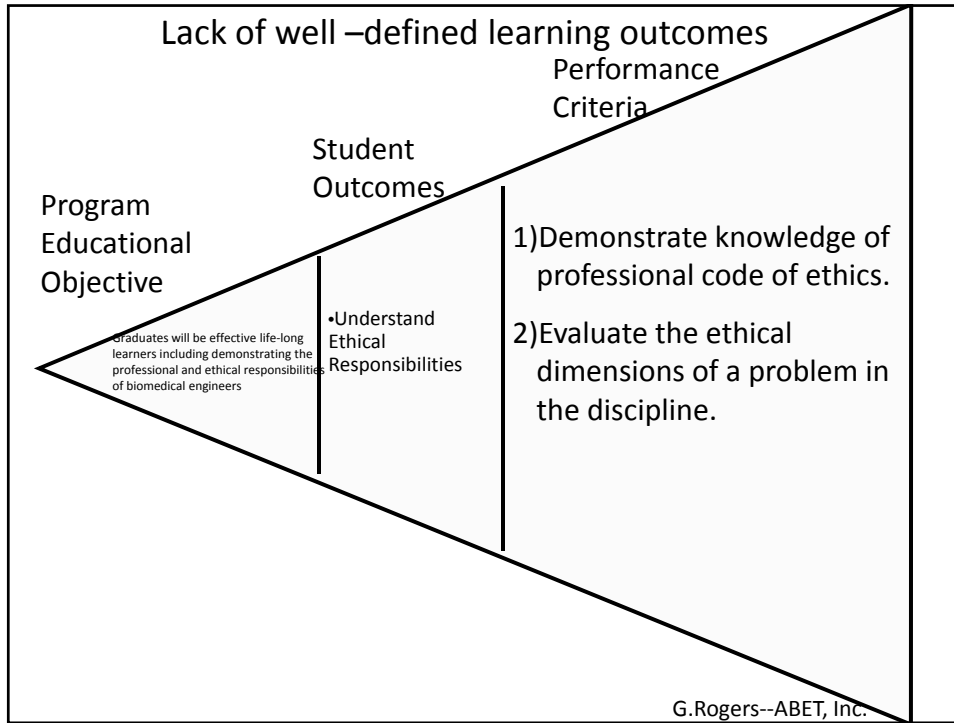
Terms	Definition	Some other terms for same concept
Program Educational Objectives	Broad statements that describe what graduates are expected to attain within a few years after graduation.	Goals, outcomes, purpose, etc.
Student Outcomes	Student outcomes describe what students are expected to know and able to do by the time of graduation.	Objectives, standards, etc.
Performance Criteria	Specific, <u>measurable</u> statements identifying the performance(s) required to meet the outcome; confirmable through evidence.	Standards, indicators specifications, metrics, outcomes, etc.
Assessment	Processes that identify, collect, use and prepare data that can be used to evaluate achievement.	Evaluation
Evaluation	Process of reviewing the results of data collection and analysis and making a determination of the value of findings and action to be taken.	Assessment



## Differences between classroom and program assessment

- ✓ Degree of complexity
- ✓ Time span
- ✓ Accountability for the assessment process
- ✓ Cost
- ✓ Level of faculty buy-in
- ✓ Level of precision of the measure



Performance Criterion **Explicit.** This criterion is explicitly stated as performance for this course.  
**Demonstrate Competence.** Students are asked to demonstrate their competence on this performance criterion through homework, projects, tests, etc.  
**Formal Feedback.** Students are given formal feedback on their performance on this criterion.  
**Not covered.** This performance criterion is not addressed in this course.  
 Note: Clicking on the link 'view rubric' will show you the scoring rubric for that particular performance criteria related to the outcome.

Performance Criteria	Criterion Explicit	Demonstrate Competence	Formal Feedback	Not Covered
<b>Recognition of ethical and professional responsibilities.</b>				
1. Demonstrate knowledge of professional codes of ethics. <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>
2. Evaluate the ethical dimensions of professional engineering, mathematical, and scientific practices. <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes21	<input type="checkbox"/>
<b>An ability to work effectively in team</b>				
1. Share responsibilities and duties, and take on different roles when applicable <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>
2. Analyze ideas objectively to discern feasible solutions by building consensus <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>
3. Develop a strategy for action. <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>
<b>An ability to communicate effectively in oral, written, graphical, and visual forms</b>				
1. Identify the readers/audience, assess their previous knowledge and information needs, and organize/design information to meet those needs. <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>
2. Provide content that is factually correct, supported with evidence, explained with sufficient detail, and properly documented. <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>
3. Test readers/audience response to determine how well ideas have been relayed. <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>
4. Submit work with a minimum of errors in spelling, punctuation, grammar, and usage. <a href="#">View rubric</a> or make a <a href="#">comment (optional)</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/>

**Curriculum map for Communication Skills - All Criteria**













	1 <sup>st</sup> Year		2 <sup>nd</sup> Year		3 <sup>rd</sup> Year		4 <sup>th</sup> Year					
<b>FALL</b>	CM 111	Chem I	4	CH 01	Cons Principles	4	CH 414	Heat Transfer	4	CH 400	Career P III	0
	EM 100	Life Skills	1	CM 251	O Chem I	4	CH 415	Materials	4	CH 401	Mass II	4
	EM 104	Graph Comm	2	MA 221	DE I	4	CM 225	A Chem I	4	CH 403	Lab II	2
	RH 131	Fresh Comp	4	HSS	Elective	4	CH 304	Thermo II	4	CH 404	Kinetics	4
	MA 111	Calc 1	5	CH 200	Career P I	0					Elective	4
<b>WINTER</b>	CM 113	Chem II	4	CH 202	Che Proc Calc	4	CH 300	Career P II	0	CH 406	Design I	4
	PH 111	Physics I	4	CM 252	O Chem II	4	CM 360	P Chem	4	CH 408	Lab III	2
	HSS	Elective	4	MA 222	DE II	4	CH 305	Mass I	4	CH 440	P Control	4
	MA1 12	Calc II	5	EM 101	Statics I	2	MA 227	Statistics	4	HSS	Elective	4
	MS 120	M. History	1				HSS	Elective	4		Elective	4
<b>SPRING</b>	CM 115	Chem III	4	CH 301	Fluids	4	EE 206	EEE	4	CH 407	Design II	4
	CS 100	Program.	2		Elective	4	CH 402	ChE Lab I	1	CH 409	Prof Prac	1
	EM 103	Int Design	2	HSS	Elective	4		Elective	4	HSS	Elective	4
	MA 113	Calc III	5	CH 303	Thermo I	4		Elective	4		Elective (Des)	4
	PH 112	Physics II	4				HSS	Elective	4		Elective (free)	4

Business Administration Map	Macro-Economics	Micro-Economics	Microcomp App for Bus	Writing for Bus	Pre-Cal (Bus)	Intro to Bus	Bus Statistics	Prin Mgmt	Prin Mktg	Internati onal Bus	Prin Acctg I	Prin Acctg II	Bus Law I	Mtg Finance
I = Introduce; R = Reinforce; E = Emphasize	Econ 207	Econ 208	CS 214	Eng 200	Math 1165	Busi 201	Busi 203	Busi 211	Busi 231	Busi 241	Busi 251	Busi 252	Busi 281	Busi 371
<b>Writing Competencies</b>														
Identify a subject and formulate a thesis statement.								I						
Organize ideas to support a position.				I		R			R				R	
Write in a unified and coherent manner appropriate to the subject matter.				I		R			R				R	
Use appropriate sentence structure and vocabulary.				I		R			R				R	
Document references and citations according to an accepted style manual.						I			R				R	
<b>Critical Thinking Competencies</b>														
Identify business problems and apply creative solutions.								I	R	R	R		R	E
Identify and apply leadership techniques.								I					R	E
Translate concepts into current business environments.								I	R	R	R		R	E
Analyze complex problems by identifying and evaluating the components of the problem.											R	R	E	E
<b>Quantitative Reasoning Competencies</b>														
Apply quantitative methods to solving real-world problems.											R	R		E
Perform necessary arithmetic computations to solve quantitative problems.						I		R			R	R		E
Evaluate information presented in tabular, numerical, and graphical form.														
Recognize the reasonableness of numeric answers.						I		R			R	R		E

I = Introduce  
R = Reinforce  
E = Emphasize

'Assessing for Learning' by Peggy L Maki, Stylus Publishing, 2004  
Source: New Jersey City University Business Administration Program

## Assessment Methods

- Written surveys and questionnaires 
- Exit and other interviews 
- Standardized exams 
- Locally developed exams 
- Archival records 
- Focus groups 
- Portfolios 
- Simulations 
- Performance Appraisal 
- External examiner 
- Oral exams 
- Behavioral observations 

## Direct Measures

Direct measures provide for the direct examination or observation of student knowledge or skills against measurable performance criteria.

## Indirect Measures

Indirect measures of student learning that ascertain the opinion or self-report of the extent or value of learning experiences

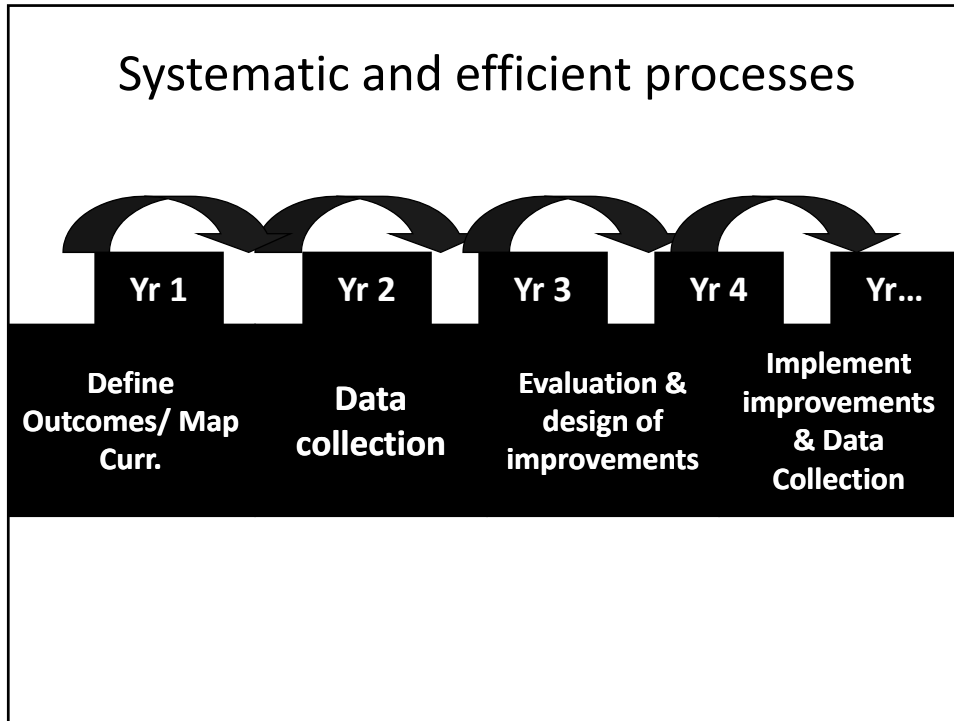
### Direct

- Exit and other interviews
- Standardized exams
- Locally developed exams
- Portfolios
- Simulations
- Performance Appraisal
- External examiner
- Oral exams
- Behavioral observations

### Indirect

- Written surveys and questionnaires
- Exit and other interviews
- Archival records
- Focus groups

**Remember, whether or not a particular assessment method is direct or indirect depends on the nature of what is being measured and how the method is being used.**



<b>Learning Outcomes:</b>	03-04	04-05	05-06	06-07	07-08	08-09
<b>A recognition of ethical and professional responsibilities</b>	★			★		
<b>An understanding of how contemporary issues shape and are shaped by mathematics, science, &amp; engineering</b>		★			★	
<b>An ability to recognize the role of professionals in the global society</b>			★			★
<b>An understanding of diverse cultural and humanistic traditions</b>	★			★		
<b>An ability to work effectively in teams</b>		★			★	
<b>An ability to communicate effectively in oral, written, graphical, and visual forms</b>			★			★

### Things I wish I had known:

- ✓ Capitalize on what faculty are already doing
- ✓ One size does not fit all
- ✓ You don't have to measure everything all the time
- ✓ More data are not always better
- ✓ Honor faculty time
- ✓ Pick your battles
- ✓ Don't wait for perfection
- ✓ Be patient, quality assessment takes time
- ✓ Reward for faculty comes in different ways