Assessing and Communicating Library Contributions to Student Learning and Success through Action Research

Facilitator Team

Overview and Background

- ACRL Plan for Excellence
- Value of Academic Libraries Initiative
- Assessment in Action Program
  - 15 Month Intensive (2013-2016)
  - ACRL 2017 Preconference
  - ACRL 2017 Directors Workshop
  - Road Show (Starting in May 2017)
  - *Under Consideration – eLearning Options*

Outcomes for Today

- Apply action research as a means to designing robust assessment plans, practices, and processes.
- Implement assessment practices that document the impact of libraries on student learning, academic programs and activities, and institutional initiatives.
- Collaborate with key campus partners to plan and conduct assessment that align library outcomes with institutional initiatives, priorities, and assessment activities.
- Use the results of assessment and action research to foster support for library contributions to student learning and success.

Today's Schedule

8:30-8:45 a.m.	Welcome and Introductions (Lisa)
8:45-9:25 a.m.	Assessment and Action Research (Melanie)
9:25-9:45 a.m.	Institutional Priorities/Connecting to Campus (Karen)
9:40-10:00 a.m.	Break
10:00-11:45 a.m.	Assessment Cycle and Inquiry Question (Brandy)
11:45 a.m.-1:00 p.m.	Lunch
1:00-2:15 p.m.	Alignment, Analysis, Interpretation, and Decision-Making (Lisa)
2:15-2:30 p.m.	Break
2:30-3:15 p.m.	Taking Action and Communicating (Karen)
3:15-3:30 p.m.	Wrap-Up and Community of Practice (Lisa)

Participant Introductions

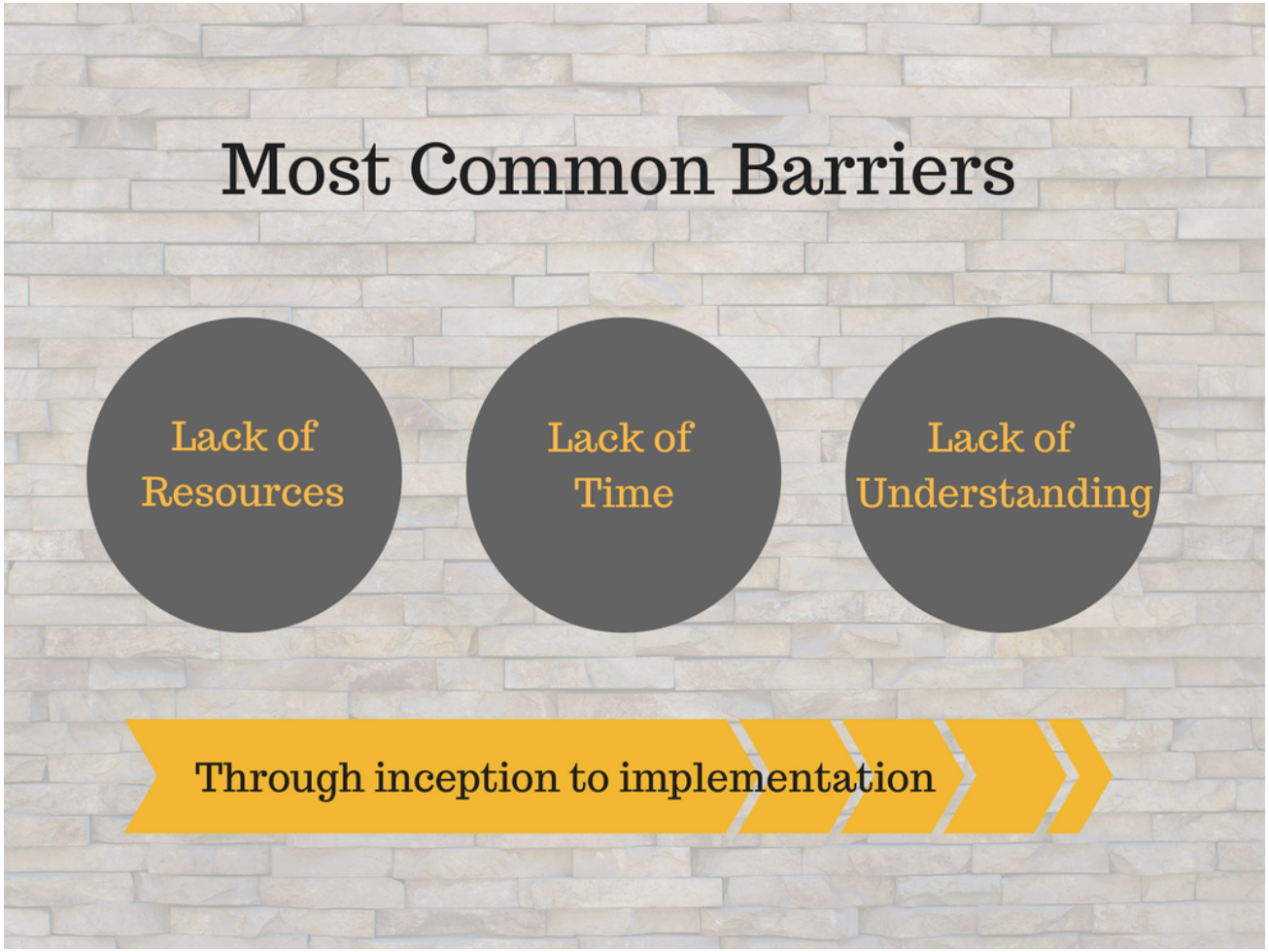
Introduction to Assessment and Action Research Methodology

Introduction: Where We're Headed

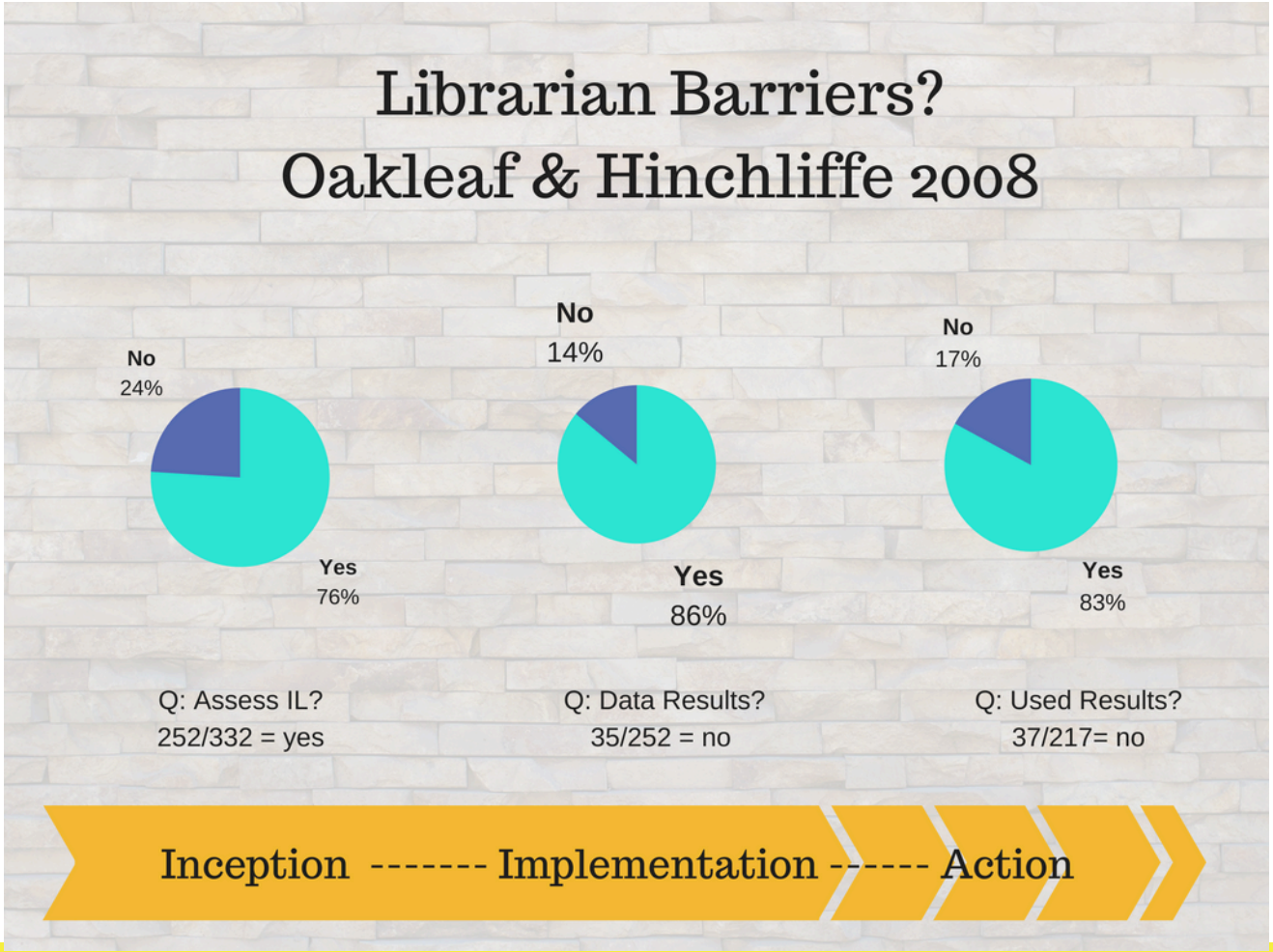
Assessment: A Macro View

Assessment: A Micro View

Assessment: A Micro View

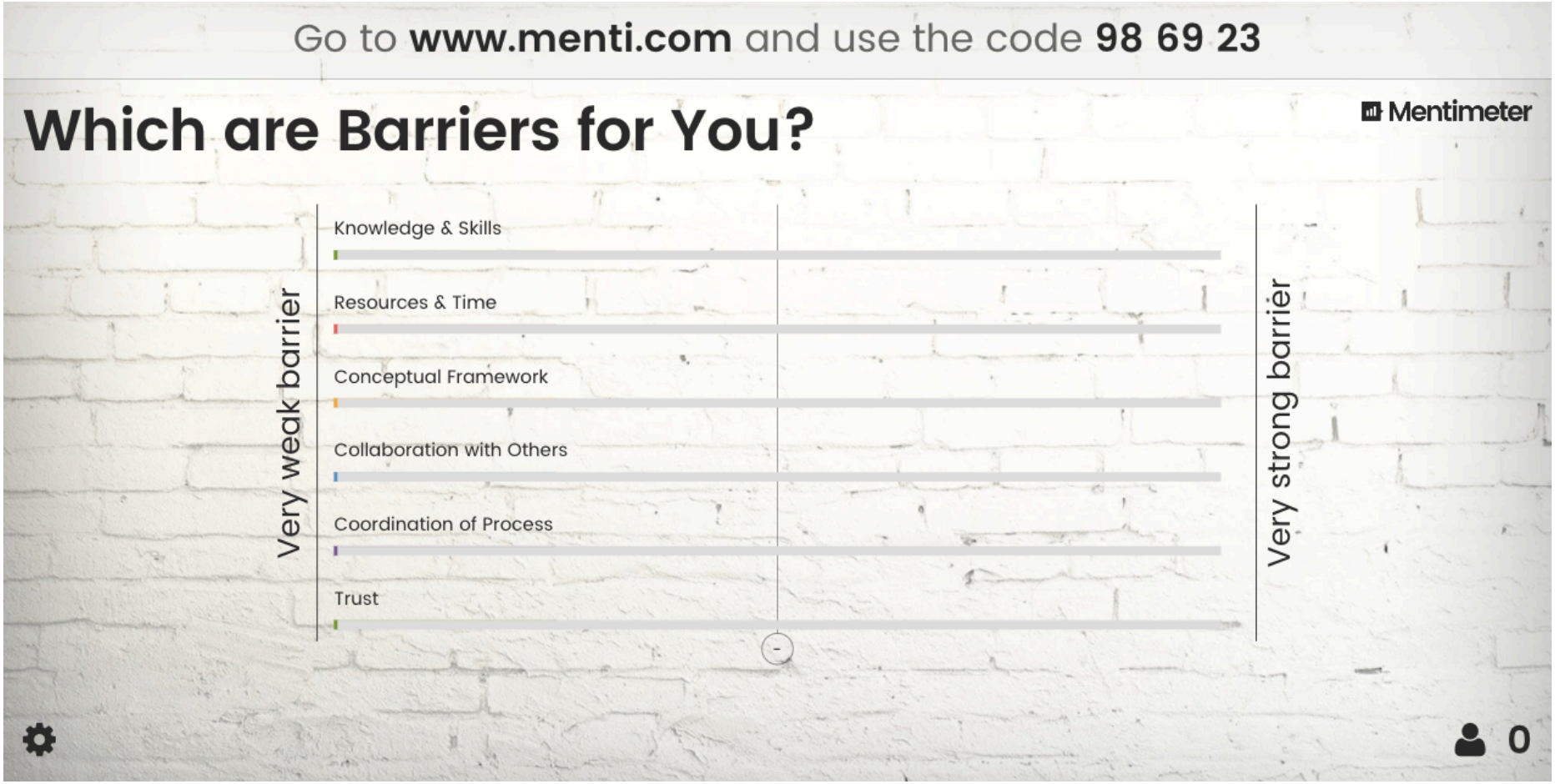


Assessment: A Micro View



Assessment: A Micro View

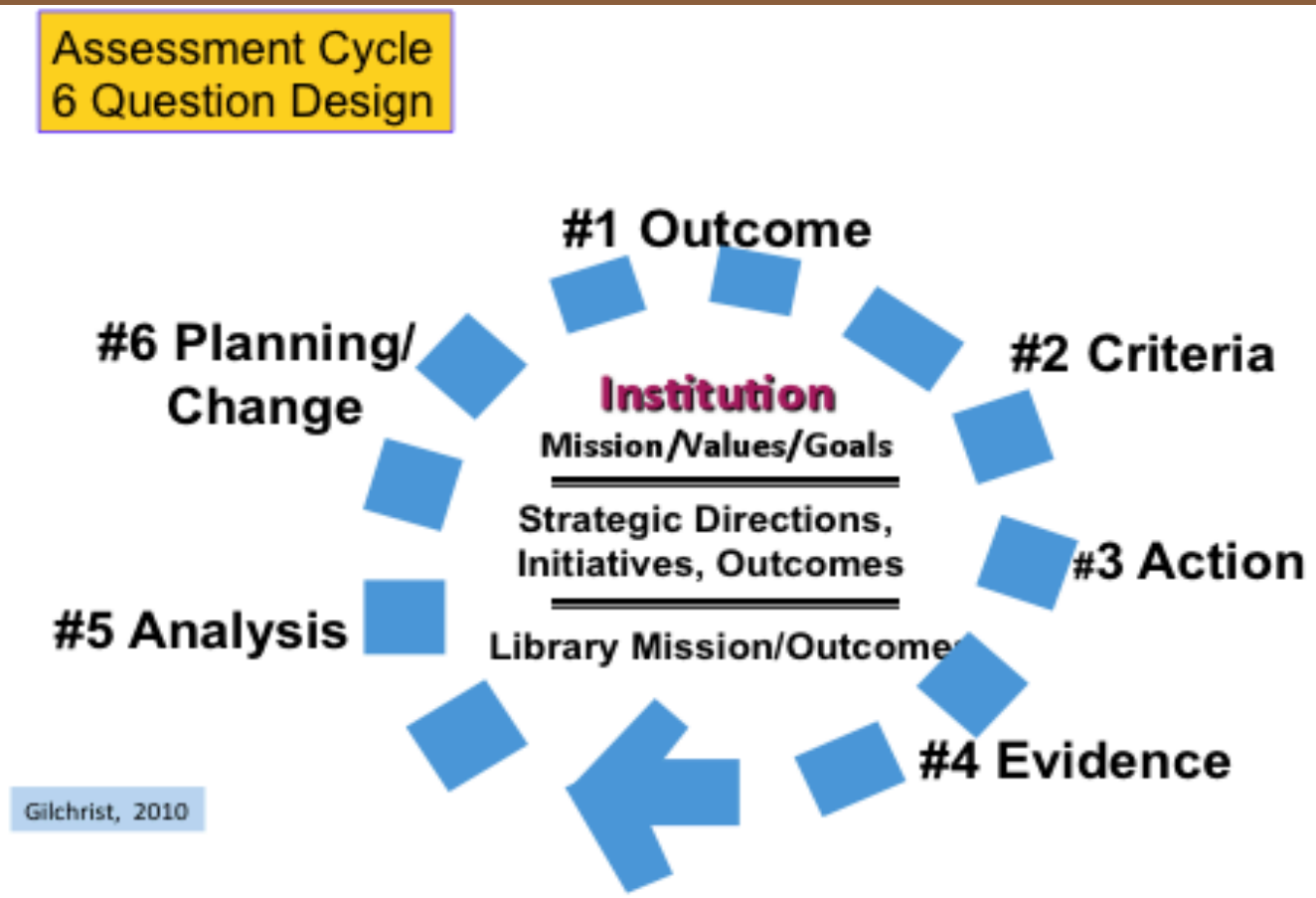
Assessment: A Macro View



Action Research as Methodology: Context

Evaluation	**Assessment**	**Research**
Designed to judge.	Designed to improve.	Designed to prove.
How well it works?	How well it works?	How it works?
Summative: final, to gauge quality	Formative: ongoing, to improve	Generates new knowledge, advance theory.
Product-oriented: what's been learned	Process-oriented: how is learning going	Prove or disprove ideas
Judgment: derive an overall rating	Diagnostic: identify areas for improvement	Generalizable
Provides information for decision-making on specific program	Strives to know what is, then uses the info to change status quo	Not usually iterative, ends with "as a result of…"
Specific setting.	Specific setting.	Scientific approach, controlled environment.
	Not perfect studies, but good	

Action Research as Methodology: Process



Action Research: Mixed Methods Example

Campus Priority: Student Success

Step 1: Outcome	Student participation in first-year course-integrated library experiences positively impacts academic success (performance and self-efficacy) in those courses.
Step 2: Criteria	1. Bibliographies will increase 30% in judged quality from pre to post instruction. 2. Student reflective journal entries show 80% increase in confidence from pre to post instruction.
Step 3: Actions	Provide information literacy instruction and embedded librarians for 1st year courses that contain research components as part of the standard curricula. Use annotated bibliography assignments, each accompanied by a reflection essay.
Step 4: Evidence	Faculty team (which includes librarians) uses adapted AACU VALUE rubric to rate pre & post instruction essays & bibliographies from five sections of a common course. Teaching faculty collect pre & post 1-page reflection essays from the same five sections and share them with librarians for qualitative coding.
Step 5: Analysis	Engaged Institutional Research assistance with analysis. Mean bibliography ratings rose from 1.73 to 2.5 (+ strong inter-reader reliability). Two librarians coded reflection essays using grounded-theory approach. Also consulted with IR on coding practices.
Step 6: Planning	What we are doing is working well so we will keep doing it with existing courses and reach out to new courses with these results. This initial assessment round has led to library instruction formally incorporated into Gen Ed learning outcomes assessment plan.

Action Research as Methodology: Practice

Scenario 1:

You've assessed student use of your media lab and made recommendations for improving library space based on your findings. However, your Library Director is resistant to giving you more support and funding to create similar spaces because space is not a part of the Library's new strategic plan. Where in the Assessment Cycle could you revisit when faced with this issue?

Scenario 2:

Your library has made a visible commitment to providing access to books using a PDA (patron-driven acquisition) model, and you know that the model is gaining some use and has a high satisfaction rate among users. However, the only assessment data you have about PDA is the amount of funds used. Where in the assessment cycle could you revisit when faced with this issue?

Institutional Priorities

+

Connecting to Campus

Institutional Priorities

What's important at your institution?

- Align library conversation with campus conversation
- Make connections explicit
- Gain traction
- Break down silos
- Position library as an educational partner on campus

Institutional Priorities

What are the big issues at your institution?

- What are you hearing on your campus?
- What are campus administrators talking about?
- What key words or phrases you hear repeatedly?

Consider:

- president/provost presentations
- institutional reports
- accreditation studies
- faculty/staff retreats
- professional development topics

Institutional Priorities

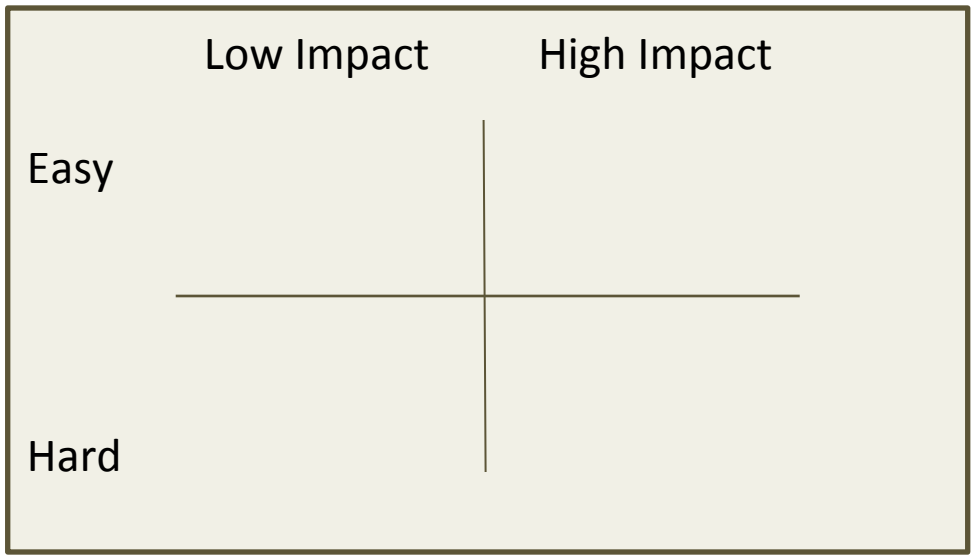
Aligning Library Assessment with Institutional Priorities

- Identify 3-4 key priorities at your institution.
- Consider who on your campus thinks it's important or is particularly interested in the priority.

Institutional Priorities

Aligning Library Assessment with Institutional Priorities

- Rank the priority's importance as a possible assessment focus.



Leveraging Campus Partnerships

Collaboration and Partnerships

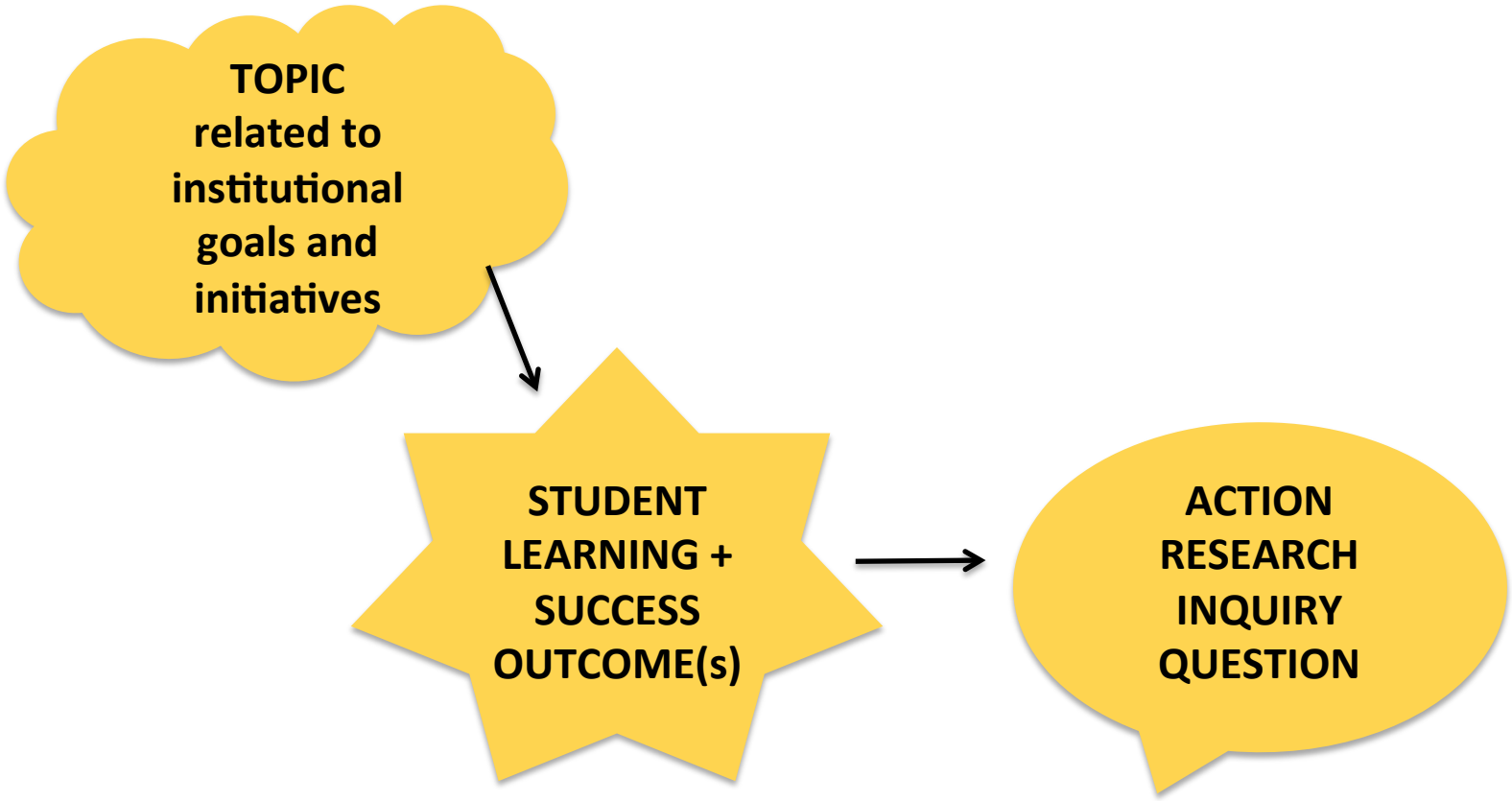
- ❑ Helps ground assessment in institutional context
- ❑ Fosters an understanding of different campus roles
- ❑ Generates important conversations
- ❑ Moves assessment beyond one project in one campus unit

Connecting Outcomes, Actions, Evidence, + Criteria

Assessment Cycle 6 Question Design

Gilchrist, 2010

Outcomes


TOPIC related to institutional goals and initiatives
STUDENT LEARNING + SUCCESS OUTCOME(s)
ACTION RESEARCH INQUIRY QUESTION

Outcomes

- describe how learners are changed as a result of our efforts
- make explicit what learners should be doing as a result of our teaching or of accessing our resources and services

Outcomes

are not focused on recording library offerings or library usage (collection counts, gate counts, number of reference interactions, resource use counts, number of library instruction sessions offered, etc.),

but rather on documenting how the library impacts student learning and success.

Outcomes

Must be

- meaningful
- achievable
- observable
- actionable

Outcomes

Example 1

Topic: student success for first-year students

Outcome: Student participation in first-year course-integrated library experiences positively impacts academic success in those courses.

Outcomes

Example 2

Topic: retention of first-year students

Outcome: Student participation in first-year course-integrated library experiences positively impacts overall retention into sophomore year.

Outcomes: Exercise

Upon successfully

_____,

(engaging with a library learning experience, resource, service, or environment)

learners will be able to

_____.

(observable learner behavior)

Outcomes

Example 1

Topic: student success for first-year students

Outcome: Student participation in first-year course-integrated library experiences positively impacts academic success in those courses.

Inquiry question: How does student participation in first-year course-integrated library experiences impact academic success in those courses?

Outcomes

Example 2

Topic: retention of first-year students

Outcome: Student participation in first-year course-integrated library experiences positively impacts overall retention into sophomore year.

Inquiry Question: How does student participation in first-year course-integrated library experiences impact overall retention into sophomore year?

Action Research Inquiry Question

How does

_____

(a specific library service, resource, environment, or experience)

impact (in a specific way)

_____?

(a particular learning outcome or other marker of student success)

Assessment Cycle 6 Question Design

Gilchrist, 2010

Criteria

- specify how we will know an outcome has been achieved, i.e., what learners will be doing as a result of our efforts
- constitute student learning or success

Criteria

Example 1
Student participation in first-year course-integrated library experiences positively impacts academic success in those courses.

Possible criteria for success:

- Bibliographies will increase N% in judged quality from pre- to post-instruction.
- After instruction, the average student bibliography score will be in the passing range.
- After instruction, N% of student bibliographies will score in the proficient range or higher.

Criteria

Example 2
Student participation in first-year course-integrated library experiences positively impacts overall retention into sophomore year.

Possible criteria for success:

- There will be a strong correlation between sophomore retention and reported confidence in using the library.
- There will be a strong correlation between sophomore retention and the quality of bibliography submitted by first-year students who have participated in course-integrated library experiences.

Exercise

In pairs, work together to craft action research inquiry statements for one or two outcomes for each of you.

Then brainstorm possible criteria that describe how we will know those outcomes have been achieved.

Assessment Cycle 6 Question Design

Gilchrist, 2010

Actions

- encompass what we do to impact student learning and success (the library learning experiences, services, resources, or environments we offer)
- can be changed as a result of outcomes assessment

Actions

- *Example 1 Outcome*: Student participation in first-year course-integrated library experiences positively impacts academic success in those courses.
- *Example 2 Outcome*: Student participation in first-year course-integrated library experiences positively impacts overall retention into sophomore year.
- *Action*: Deliver information literacy instruction and provide embedded librarians for first-year courses that contain research components as part of their standard curricula.

Assessment Cycle 6 Question Design

Gilchrist, 2010

Evidence

- the data we collect and how we collect it
- establishes the degree to which students have met the criteria for achieving a learning or success outcome
- is what we will observe or measure to gauge the success of our actions

Evidence

Direct Methods

- evidence comes from observing what learners do
- researchers measure levels of student achievement
- can be best for establishing if an outcome was achieved or not

Indirect Methods

- evidence comes from perceptions of student learning
- learners report their perceived levels of achievement
- can be critical for understanding why an outcome was or was not achieved

Mixed Methods

- evidence comes from both direct and indirect methods
- often designed to provide both quantitative and qualitative data

Evidence

Example 1 Outcome: Student participation in first-year course-integrated library experiences positively impacts academic success in those courses.

Criteria How we know we have been successful (i.e., what successful learners are doing):	Evidence What data we use, and how we collect that data:
Bibliographies will increase N% in judged quality from pre- to post-instruction. **OR** **After instruction, the average student bibliography score will be in the passing range.** **OR** **After instruction, N% of student bibliographies will score in the proficient range or higher.**	**A faculty team uses a common rubric to score pre- and post-instruction essays and bibliographies from 5 sections of a common course, providing scores to librarians for analyses.** **OR** **Faculty who utilize library instruction and/or embedded librarian services provide librarians with average grades for student bibliographies.** **OR** **Faculty who utilize library instruction and/or embedded librarian services grade student bibliographies with a common rubric, providing scores to librarians for analyses.**

Evidence

Example 2 Outcome: Student participation in first-year course-integrated library experiences positively impacts overall retention into sophomore year.

Criteria How we know we have been successful (i.e., what successful learners are doing):	Evidence What data we use, and how we collect that data:
There will be a strong correlation between sophomore retention and reported confidence in using the library. AND There will be a strong correlation between sophomore retention and the quality of bibliography submitted by first-year students who have participated in course-integrated library experiences.	At the end of their first year, students who have participated in course-integrated library experiences are surveyed to assess their confidence in using the library's resources and services. AND Faculty who utilize library instruction and/or embedded librarian services grade student bibliographies with a common rubric, providing those scores to librarians for analyses. AND Librarians and the office of institutional research partner to compile and analyze student retention data into sophomore year.

Evidence

Common Learning Outcomes Assessment Tools

- bibliographies
- audience response polls
- ethnographic studies
- faculty surveys
- fixed choice quizzes/tests
- graded assignments
- minute papers/muddiest points/one sentence summaries
- observations
- tutorials
- pre/post tests
- research logs or narratives
- standardized tests
- student self-assessments

Evidence

Obstacles to getting good evidence:

- Getting statistically significant samples
- Achieving acceptable levels of interrater reliability
- Using assessment tools that provide the best evidence of student learning and success
- Finding the time, human resources, and collaboration needed

Evidence

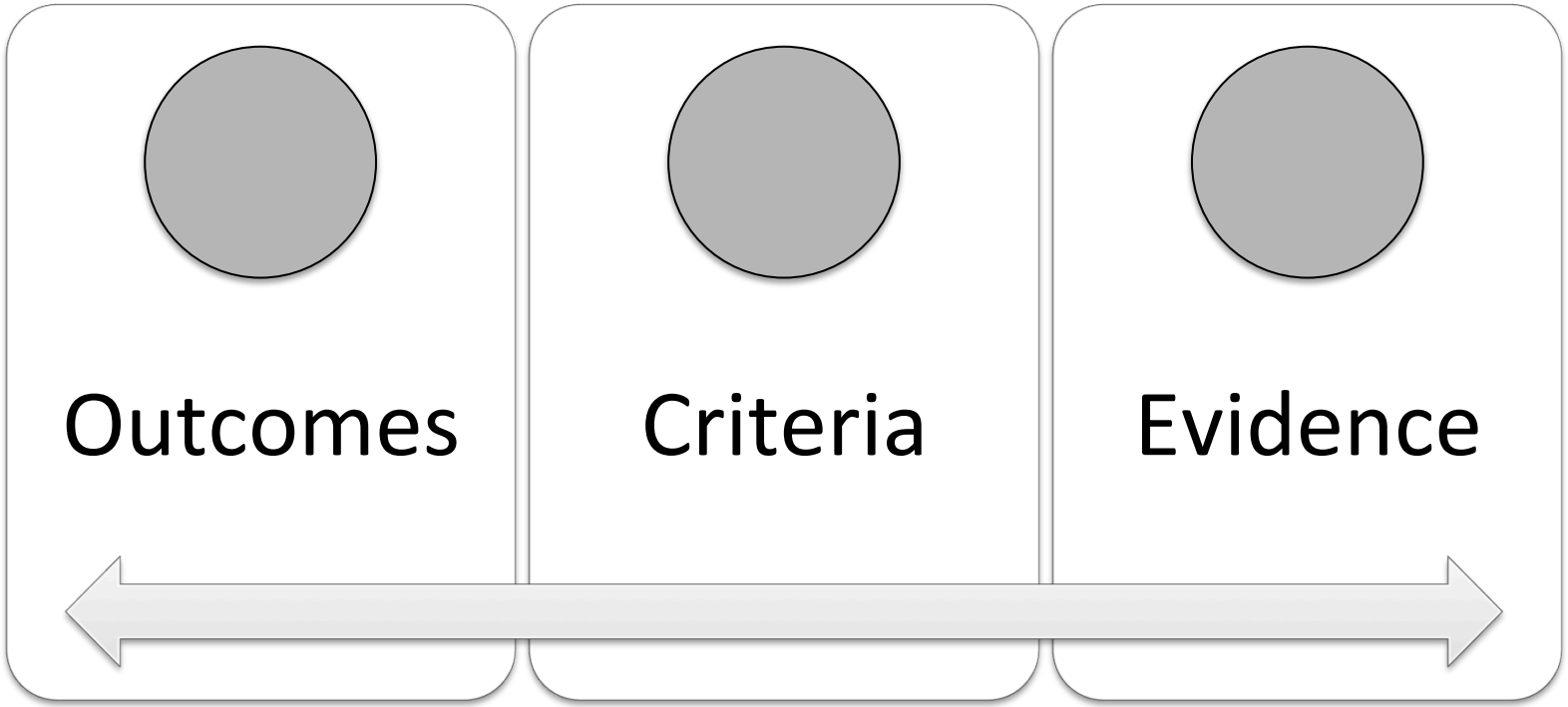
Best practices for getting good evidence:

- Whenever possible, do not rely on voluntary participation from learners or collaborators
- Collect both qualitative and quantitative data
- Involve as many stakeholders as possible in gathering evidence
- Look at the costs and benefits of using different assessment tools, and choose those tools that provide the best evidence of student learning and success, given your institution's particular strengths and limitations

Group Check-In

How Can I Tell?
The Best Evidence

Alignment



Good/Better/Best Evidence

Correlation → Causation?

- Relationship – Correlation/Pattern (Strong and Non-Random)
- Temporal Relationship – Cause Before Effect
- Consistent – Same Finding in Multiple Studies
- Credible Explanation – Supported by Theory and Known Facts

Data Analysis - Quantitative

Numerical results provide data that can be effectively summarized and arranged visually to make a case or tell a story.

General Process

- Identify Variables
- Descriptive Analysis
  - Tally/Aggregate/Frequency
  - Percentage
  - Mean/Median/Mode
- Inferential Analysis
  - Cross Tab
  - Statistical Significance

Participation in New Student Orientation Fall 2013		
Gender	Male = 1141 Female = 1446 Other = 2	44.2% 55.8% .003%
Ethnic	African Amer = 511 Caucasian = 1102 Asian Amer = 547 Hispanic = 323 Native Amer = 56 Other = 52	19.8% 42.5% 21.1% 12.4% 2.1% 2.0%
Age	Under 20 = 1273 20-30 = 862 30 and Older = 456	49.1% 33.2% 17.5%
Site	Puyallup Campus =1402 Ft Steilacoom Campus =1189	51.1% 48.9%
Satisfaction Level	4 = 1963 3 = 602 2 = 24 1 = 2	Mean: 3.7 Mode: 4 Median: 4 Min: 1 Max: 4

Crosstabs allow you to disaggregate data across multiple categories.

	Satisfaction Level
Age	
20 and Below	4
20-30	3.2
30 and Above	3
Ethnicity	
African American	2.4
Caucasian	4
Asian American	4
Hispanic	3.5
Other	3.0

Apply Descriptives

Logically compare results –
Does the data show any relationships I want to investigate further?

Given the population of students with no instruction is the norm, does my population vary from that general population? Does *n* vary from the norm?

	1	2	3	4	5	Mean	Total Students	Faculty Opinion Mean
Students Receiving Library Instruction	2	17	112	411	68	3.86	610	2.86
Students Not Receiving Library Instruction	42	192	123	152	6	3.59	515	2.66

Disaggregate and Design Cross Tabs

	Assignment Mean
Males	3.6
Females	4.8

I Have Confidence!

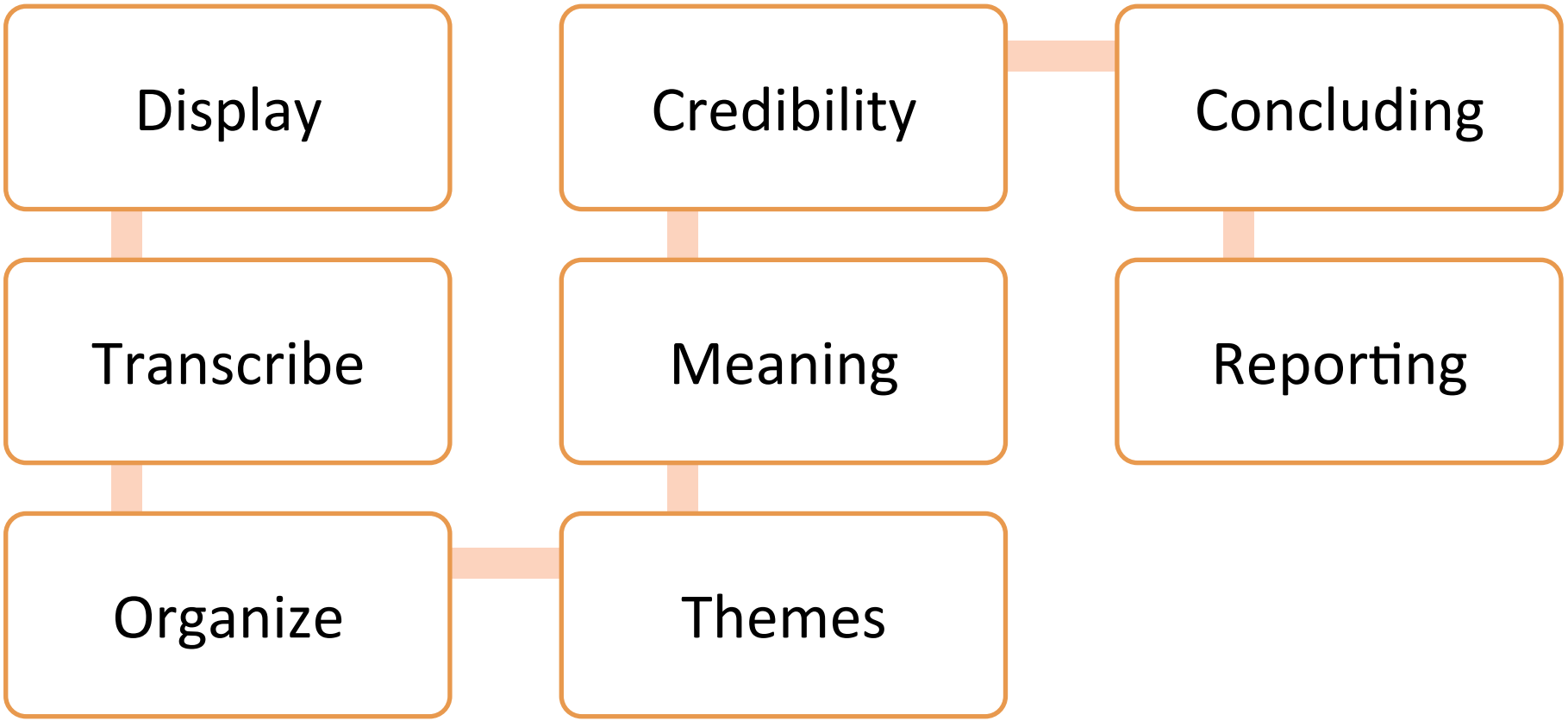
- Overall, 79% of ESL students who participated in info lit instruction received a score of 4 or 5 on the five-point rubric, compared to 31% of ESL students who did not receive info lit instruction. The difference is statistically significant at $p < 0.05$.
- Further analysis can be conducted at the disaggregated level. For example, 59% of males who participated in info lit instruction received a score of 4 or 5, compared to 78% of females. The difference is statistically significant at $p < 0.05$.

MALES	1	2	3	4	5	Total Students
Instruction	6	25	69	100	44	244
No Instruction	5	19	66	101	15	206
FEMALES	1	2	3	4	5	Total Students
Instruction	4	18	60	116	168	366
No Instruction	42	84	73	52	58	309

Data Analysis - Qualitative

Textual results provide insights into meaning and experience through codes and themes that can be arranged narratively to make a case or tell a story.

Data Analysis



Process

Words and Observations of an individual or individuals within a group

Discussions Conducted Several Times until similar trends and patterns in perception, attitudes, ideas are identified and linked.

Obtain **Viewpoints, Attitudes, Ideas, Experiences,** and **Meaning**

Analysis Steps

"Content analysis" steps:

1. Transcribe data (if audio taped)
2. Explore the data by reading transcripts – know them holistically
3. Highlight quotes and note why important – jot down your ideas in the margins
4. Sort quotes into themes
5. Interpret patterns in quotes – resort/sub-categorize
6. Describe the patterns; connect and interrelate themes

Sample Data

Outcome: Students will adopt persistence strategies and successfully complete 100 level math classes.

Method: Interviewed 25 students in 5 sections of the course taught by 5 different faculty who had been collaborating and discussing strategies and pedagogy.

Key question: What contributed to persistence?

What helped you persist?

The class was hard and I didn't expect to do. well The professor really cared so it made me want to work hard. I put off taking math and now I realize it could have helped me in other classes if I had taken it sooner.

He was real with us and say yeah, this problem is hard when something was hard so I didn't feel stupid in taking a lot of time to get it. But he also took the time to show how to do it in 2 or 3 ways. He would show some things over and over. The other thing was the taped lectures because I could listen to them over and over again at home and really get it – not just get the homework done. When I got frustrated I had something to turn to, not just give up until the next day. I also had a study group.

What about the study group helped?

I ended up with a group that were nice and everything, but also didn't feel dumb because they were about the same skill level as me - -I didn't have to feel dumb because we were working together to figure things out. The other thing was the prof gave us time in class for us to set up meeting times and stuff like that. I knew it was important since he was taking class time.

What contributed to student persistence?

Student pre-attitudes

Instructor attitude toward student achievement

Providing alternatives to classroom

Diverse pedagogy/methods

Student Feelings

Diverse pedagogy/methods

- show how to do it in 2 or 3 ways.
- show some things over and over.

Study group colleagues were the same skill level as me - - I didn't have to feel dumb because we were working together to figure things out.

Prof gave us time in class for us to set up meeting times and stuff like that. I knew it was important since he was taking class time.

Student pre-attitudes:

The class was hard and I didn't expect to do well. I put off taking math and now I realize it could have helped me in other classes if I had taken it sooner.

What assists student persistence in 100 level math classes:

- Changing Student pre-attitudes about Math
- Using Diverse Pedagogies/Methods
- Professors with Positive Attitude toward Student Achievement
- Using pedagogies that extend beyond the classroom

Could also examine transcripts to look beyond the words…

- What **triggered** different "outbursts of activity"? What prompted laughter, raised hands or lots of desire to speak? What generated a high level of interest or conflict?
- What were the **nonverbals** such as learning forward, crossed arms, nodding heads, animated faces, anger, sadness, etc.?

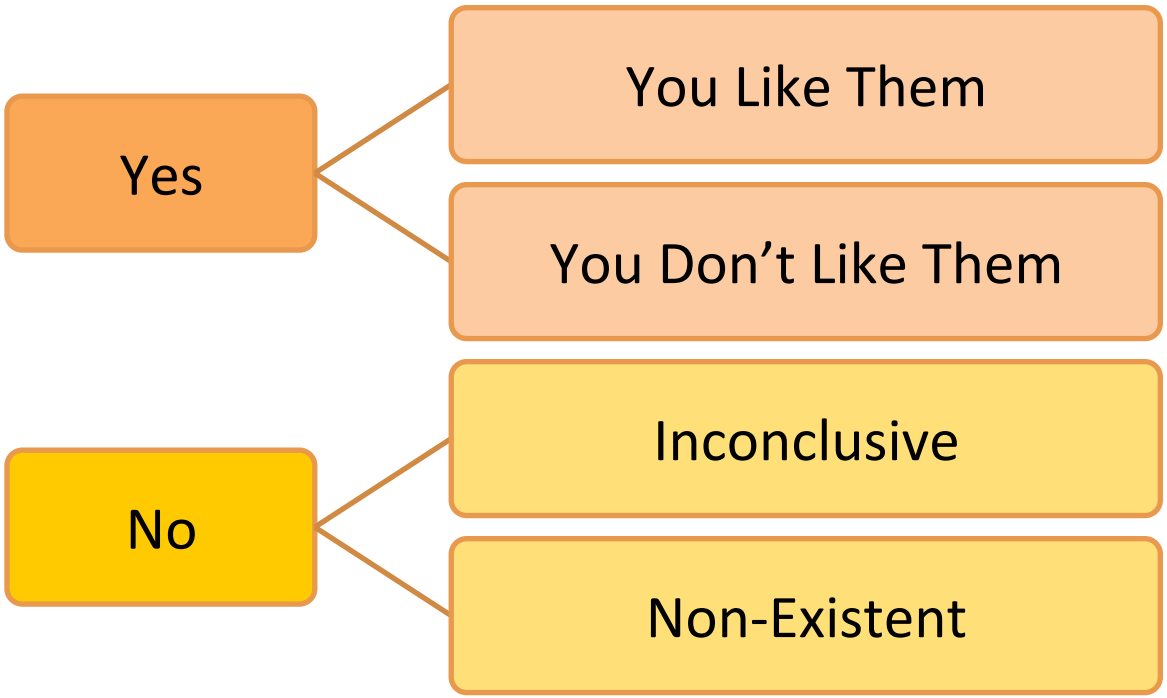
What Does It Mean?
Analysis + Interpretation

From Data to Decision

Considerations

- Who Engages
- Who Decides
- Non-Negotiables

Got Results?


Yes
You Like Them
You Don’t Like Them
No
Inconclusive
Non-Existent

Inferring from Data

1. We should start doing x more, because y.
2. We should start doing x less, because y.
3. We should study x in a different way, because y.
4. We now know the real issue is not x, therefore our next step should be z.
5. We know x works, so we should keep doing x.
6. [Make Your Own]

What Do You Predict?

Group Check-In

Taking Action
+
Communicating Results

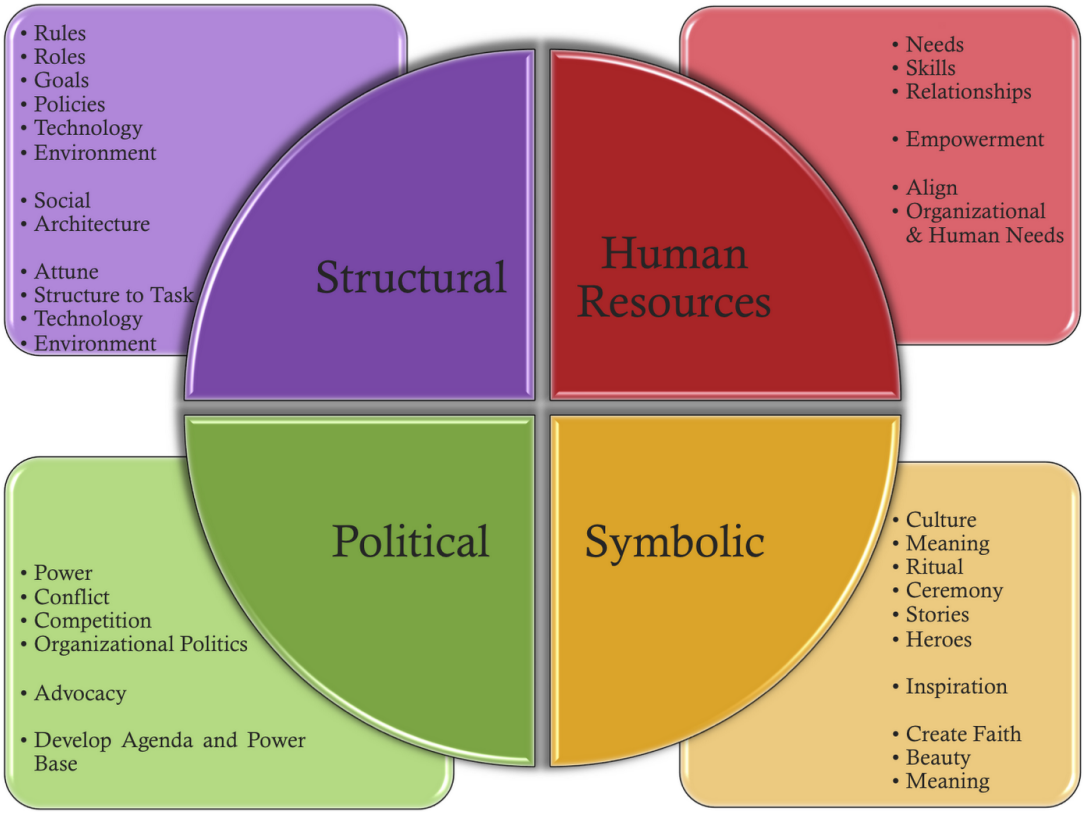
Communicating And Taking Action

- Who are your stakeholders? Who should hear your message?
- Why will the findings matter to them?

Communication Strategies:
Offer Solutions

Communication Strategies: Show Understanding

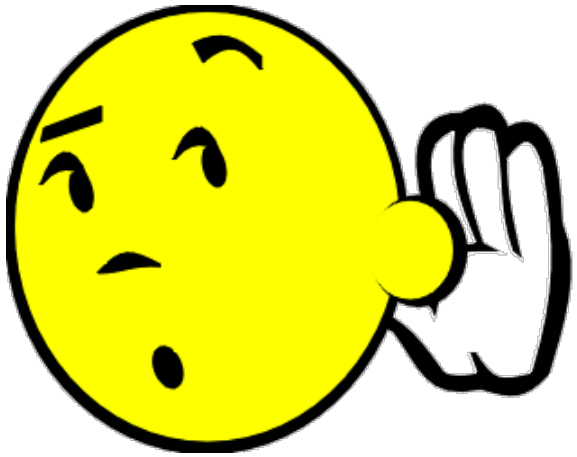
Communication Strategies: Framing



Bolman and Deal's *Four Frames*

Image source: http://principalspov.blogspot.com/2011/03/reframing-organizations-idesmar.html

Communication Strategies: Peer/Aspirant Institutions



What are other institutions doing that is effective?

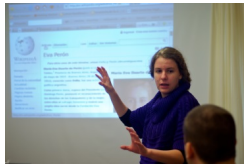
How do your assessment findings support these actions?

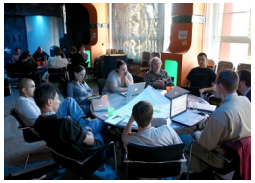
Communication Strategies: Action

Packaging Your Message

What form should your message take? How should you "package" it?

Report 

Presentation 

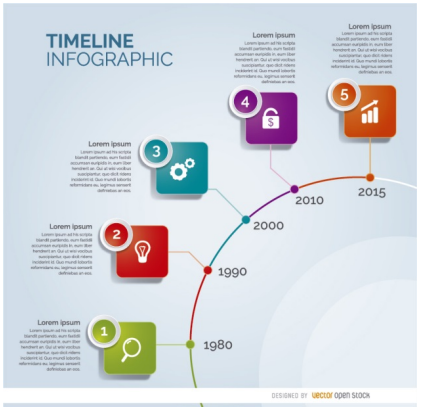
Meeting 

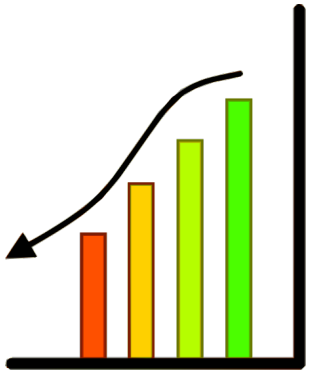
Newsletter 

Campus Social Media 

Packing Your Message

How Should You Present the Findings?





Planning Your Message

Begin to prepare a communication plan

- ✓ Who
- ✓ What and Why
- ✓ Approach
- ✓ Packaging Your Message
- ✓ When and Where