Evidence Based Practice for Library Instruction
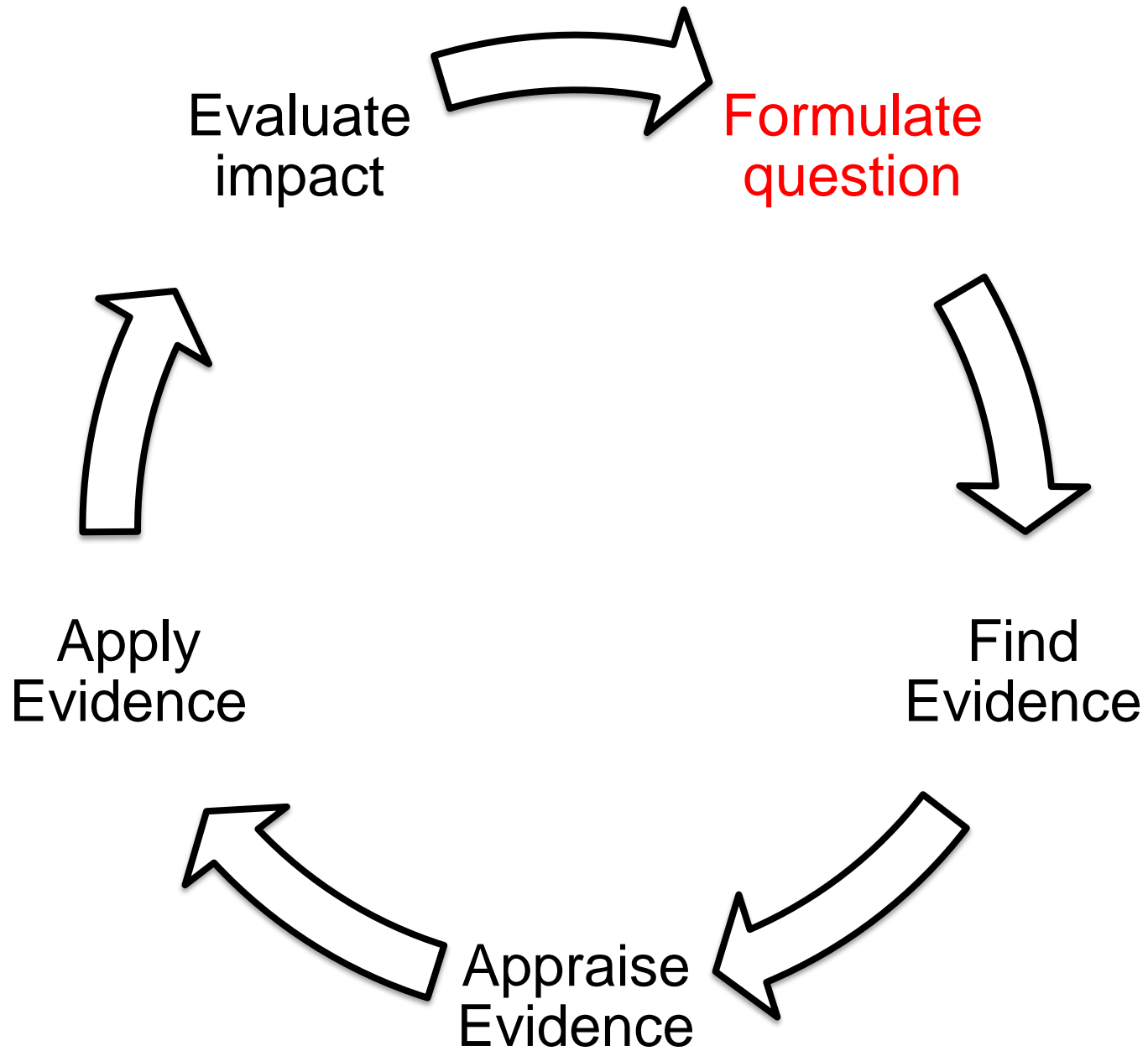
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TLA Conference, April 2011

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Definition

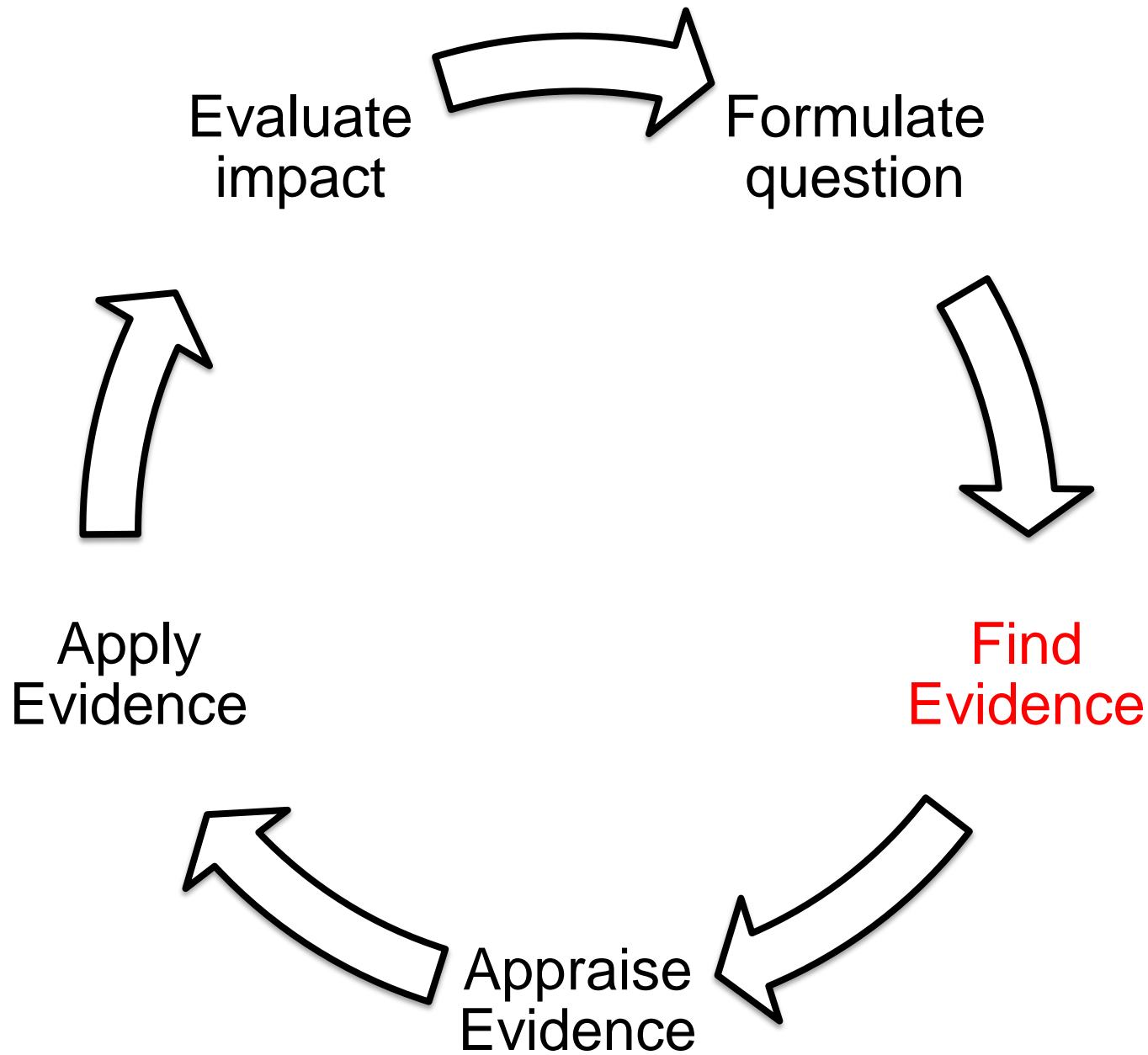"Evidence-Based Librarianship (EBL) is an approach to information science that promotes the collection, interpretation and integration of valid, important and applicable user-reported, librarian observed, and research-derived evidence. The best available evidence, moderated by user needs and preferences, is applied to improve the quality of professional judgements."

Andrew Booth

Evaluate impact → Formulate question → Find Evidence → Appraise Evidence → Apply Evidence → Evaluate impact

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Example Question

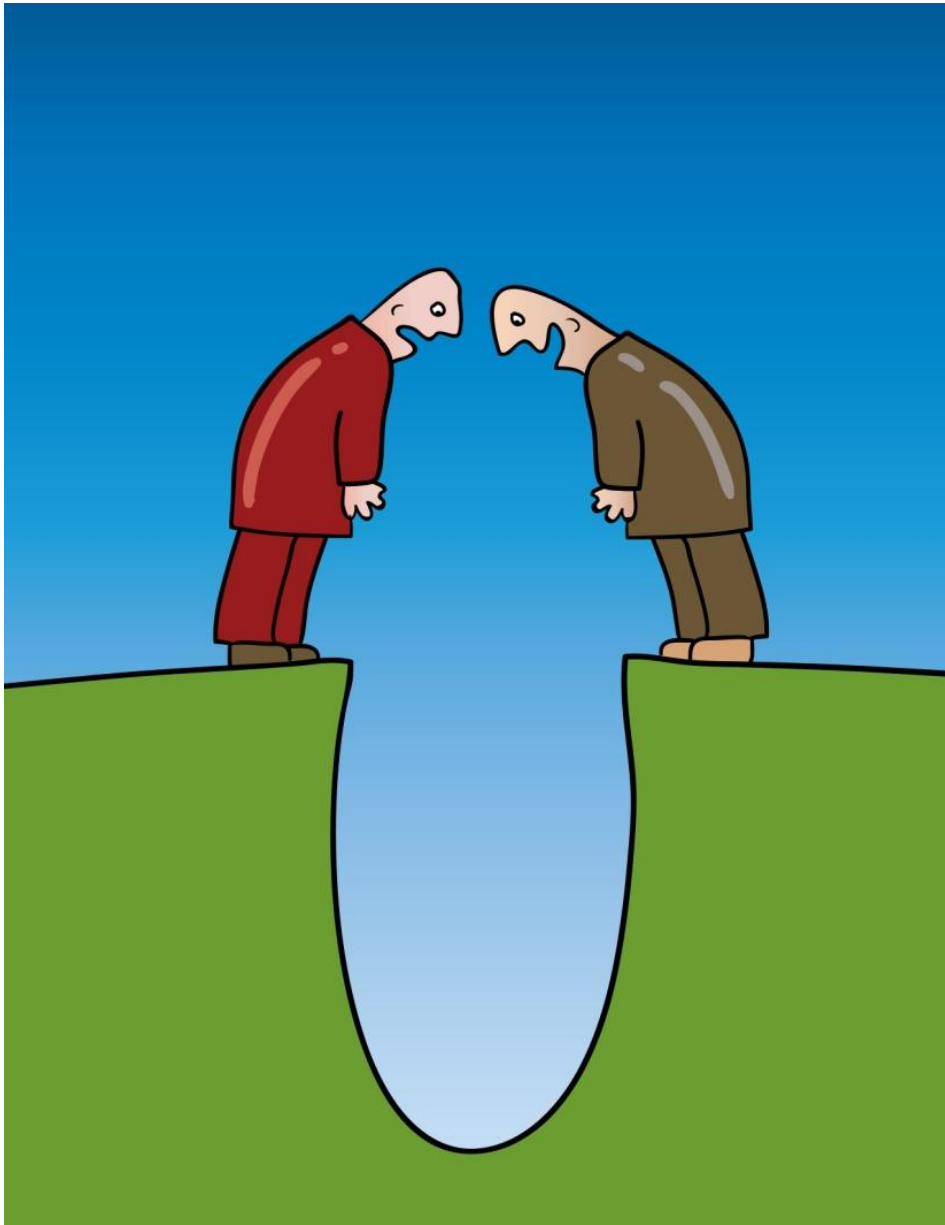Is either face-to-face instruction or online tutorials significantly more effective in teaching first-year students information literacy skills?

Evaluate
impact

Formulate
question

Find
Evidence

Appraise
Evidence

Apply
Evidence

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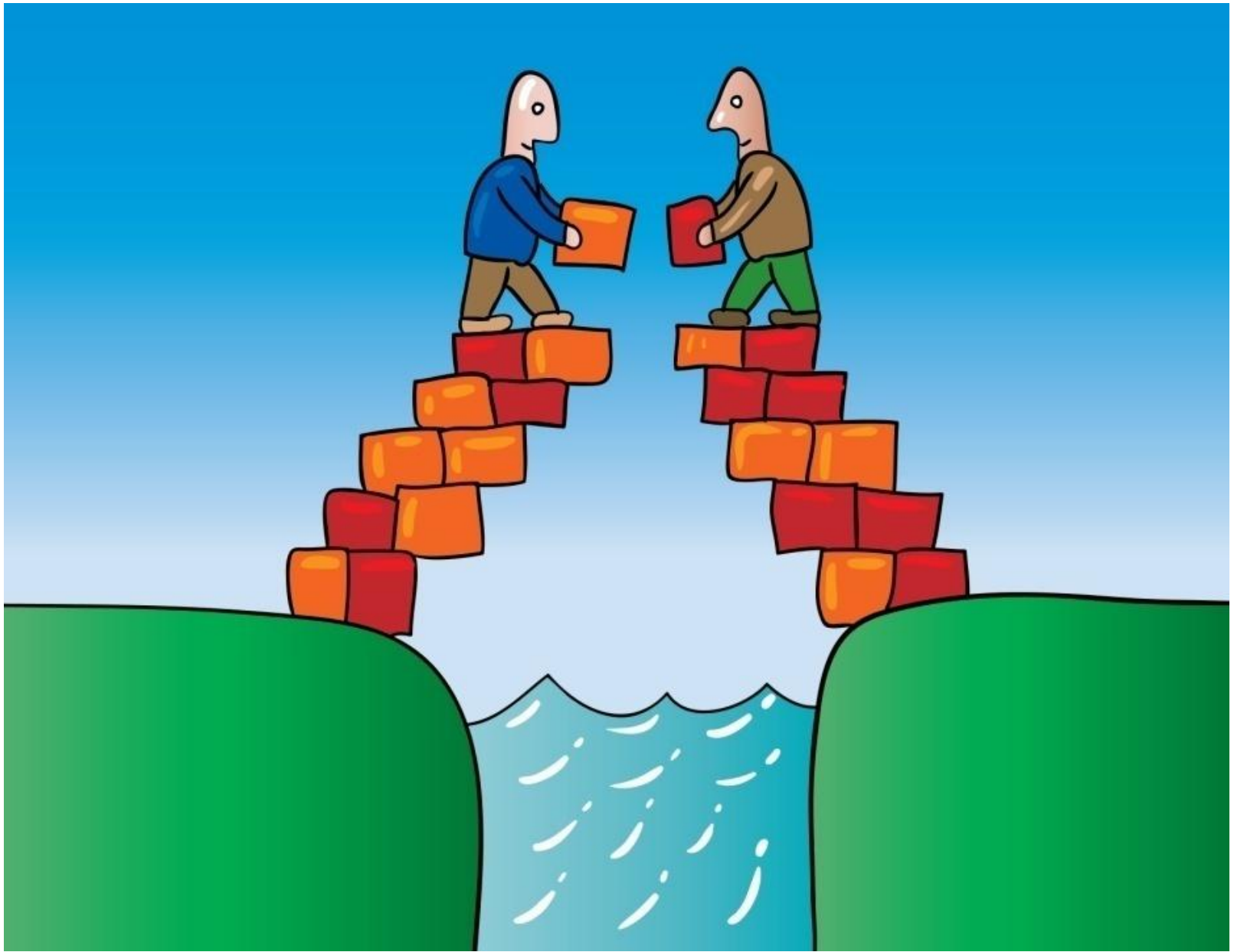
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The Search

Journal Titles

- Journal of Academic Librarianship
- Portal
- College & Research Libraries
- Communications in Information Literacy
- Evidence Based Library & Information Practice
- Journal of Education for Library & Information Science
- Research Strategies

COLLEGE & RESEARCH LIBRARIES

July 2004 · Volume 65 · Number 4

The Academic Library as a Gateway to the Internet: An Analysis of the Extent and Nature of Search Engine Access from Academic Library Home Pages
Carol A. Wright

Raising the Bar: An Approach to Reviewing and Revising Standards for Professional Achievement for Library Faculty
Edward F. Lener, Bruce Pencek, and Susan Ariew

Academic Dishonesty, Plagiarism Included, in the Digital Age: A Literature Review
Zorana Ercegovac and John V. Richardson, Jr.

Planning Bioinformatics Education and Information Services in an Academic Health Sciences Library
W. John MacMullen, K.T.L. Vaughan, Margaret E. Moore

Toward a New Venture: Building a Stronger Partnership with Faculty
Ada M. Ducas and Nicole Michaud-Oystryk

Library Jargon: Student Recognition of Terms and Concepts Commonly Used by Librarians in the Classroom
Norman B. Hutcherson

Association of College and Research Libraries

Practitioner-Observed Evidence

- professional judgment and expertise
- interaction with colleagues
- communities of practice
  - Conference papers & posters (grey lit)
  - Institutional/subject repositories
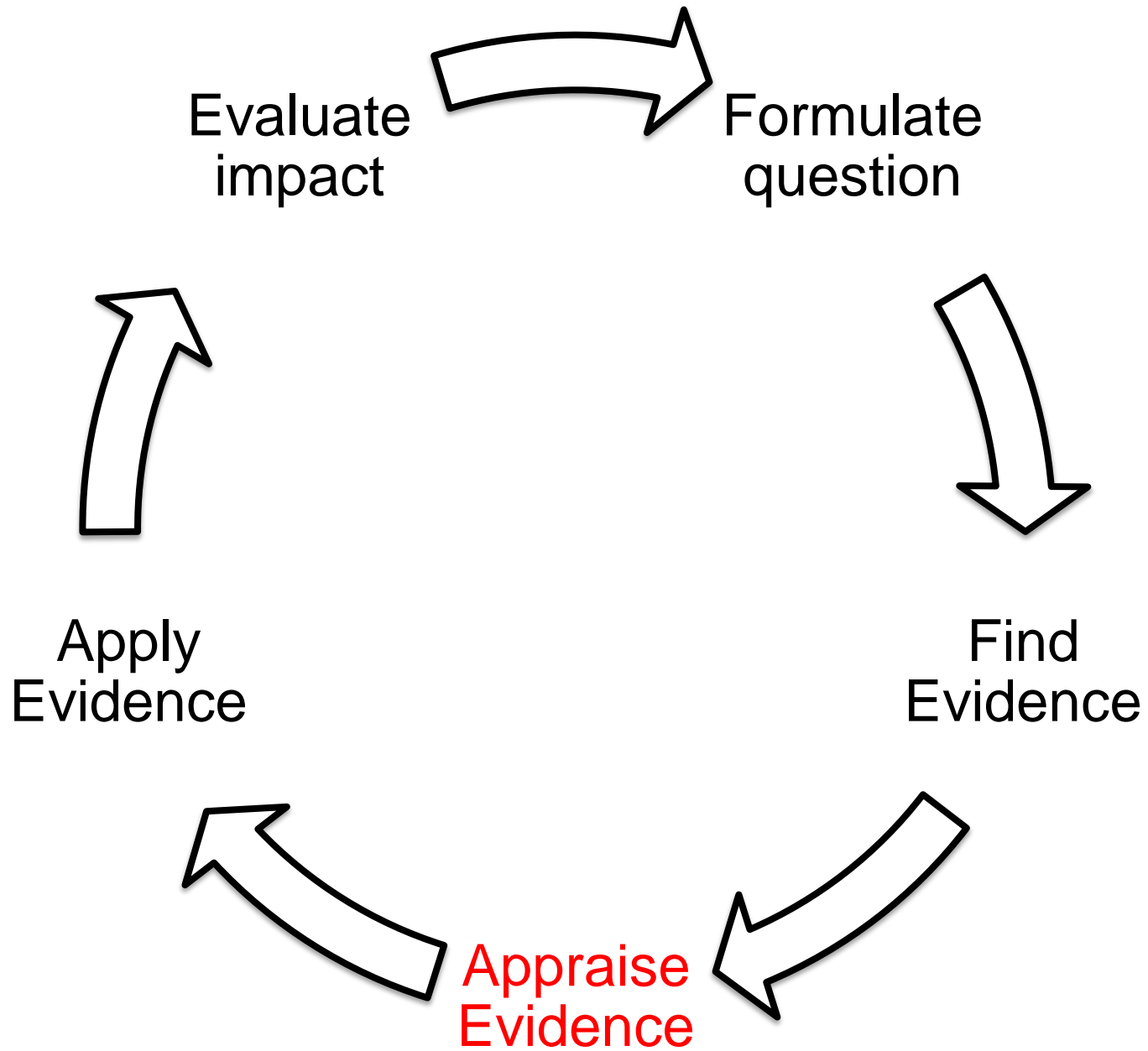 - Listservs
  - Blogs
  - Wikis

Evaluate impact → Formulate question → Find Evidence → Appraise Evidence → Apply Evidence → Evaluate impact

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Evidence…

What makes for good evidence?
What makes for bad evidence?

What is critical appraisal?

- Putting aside personal opinion and judging a research study on its own merits

- Reading a paper with a questioning mind

- Thinking critically

- Using a structure/set of questions
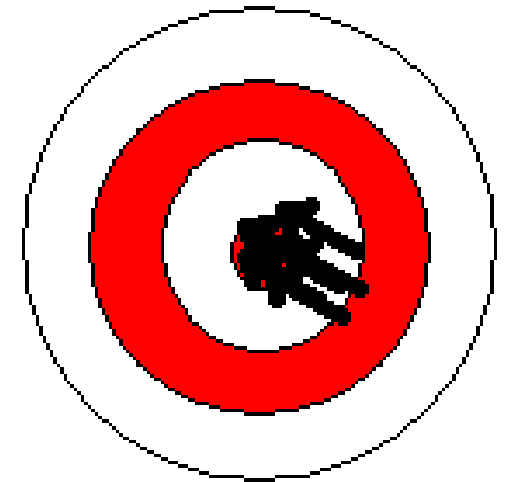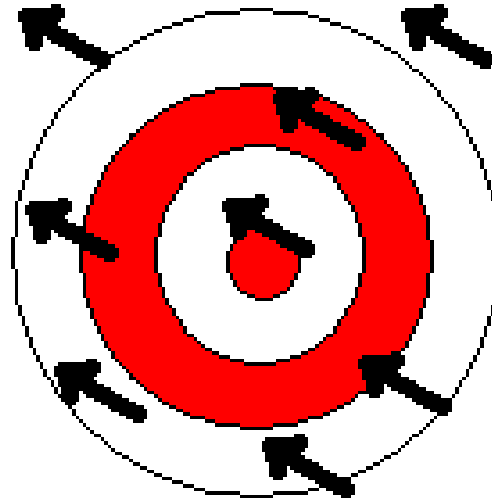
Applicability

Evidence Summaries

- Critical appraisal synthesis of recently published research
- Objective critique with the goal to help practitioners make more informed decisions about the quality of the research that they may be considering
- Structured abstract gives an overview of the article
  - Objective, Design, Setting, Subjects, Methods, Main Results, Conclusion
- Commentary section critically appraises the research
- Considers questions of validity, reliability, applicability

Example Question

Is either face-to-face instruction or online tutorials significantly more effective in teaching first-year students information literacy skills?

Evidence Based Library and Information Practice

Evidence Summary

Face-to-face Training is the Preferred Modality of Professional Continuing Education for Librarians of All Ages, but More Evidence is Needed

A Review of:
Lynn, V. A., Bose, A., & Boehmer, S. J. (2010). Librarian instruction-delivery modality preferences for professional continuing education. *Journal of the Medical Library Association*, 98(1), 57-64.

Reviewed by:
Kathryn Oxborrow
Collection Management Librarian, National Library of New Zealand Te Puna Mātauranga o Aotearoa
Department of Internal Affairs Te Tari Taiwhenua
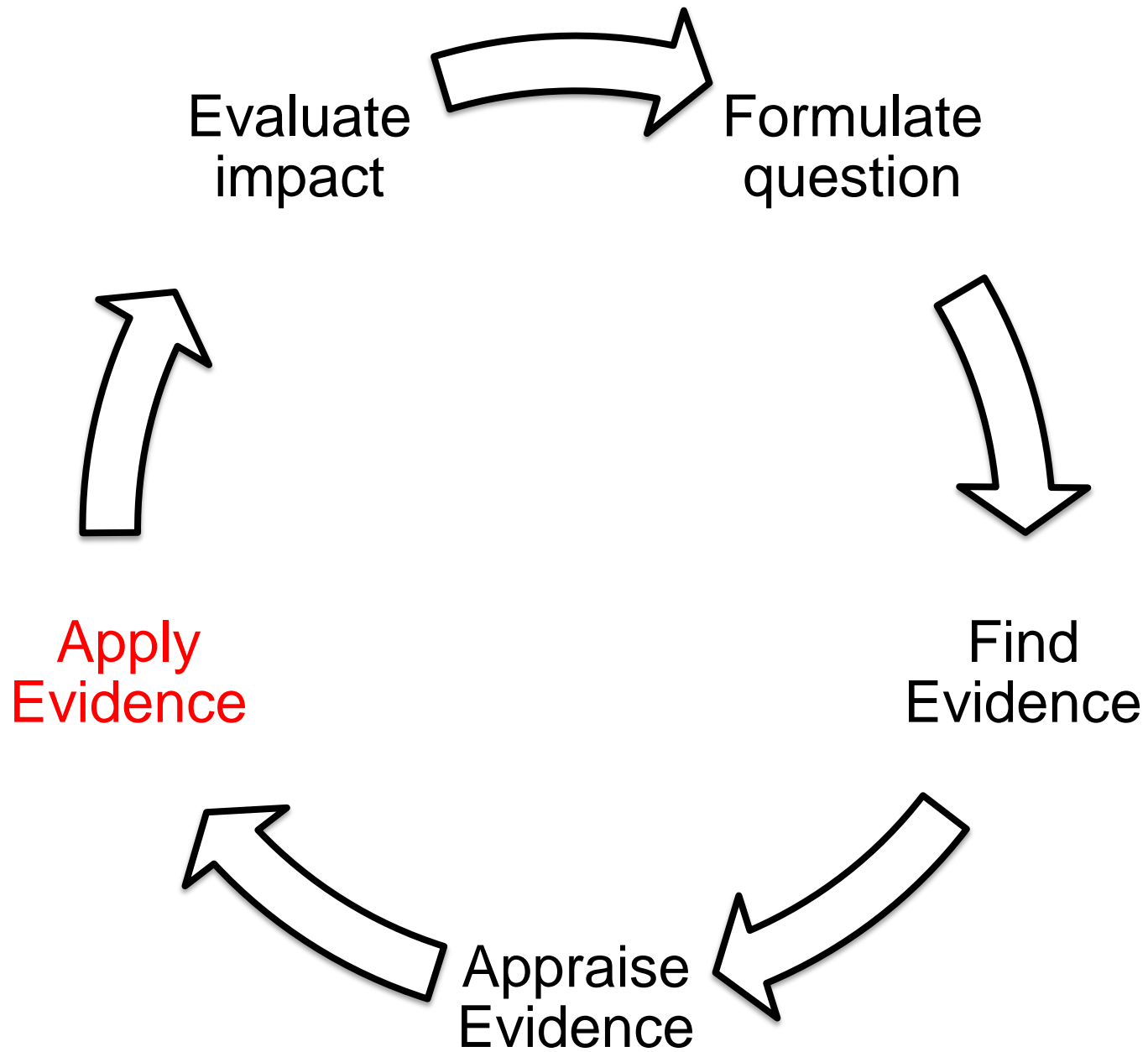Wellington, New Zealand
Email: Kathryn.Oxborrow@dia.govt.nz

THINKING CAP

Whoa.

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Evaluate impact → Formulate question → Find Evidence → Appraise Evidence → Apply Evidence →

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Take Action!

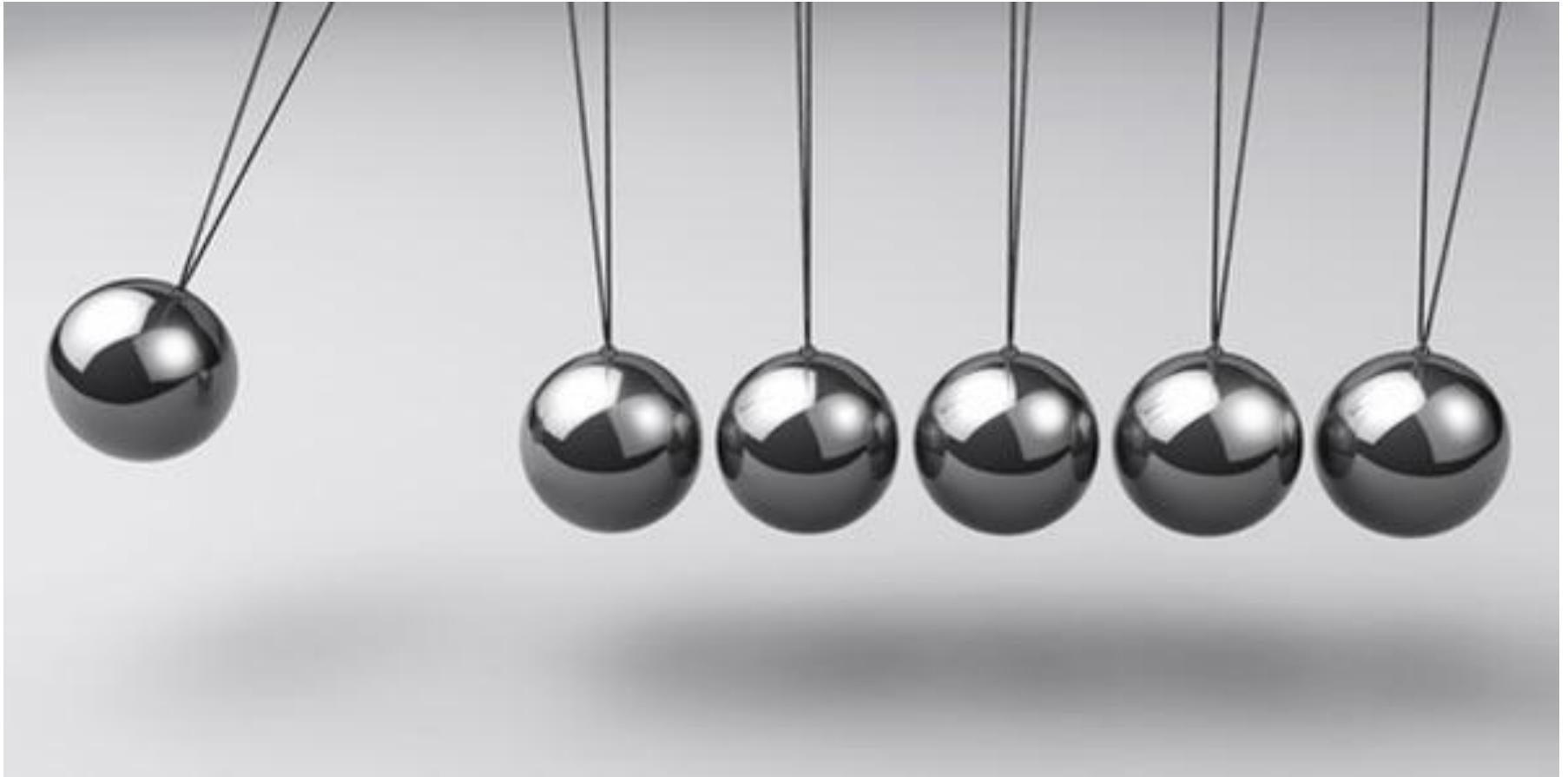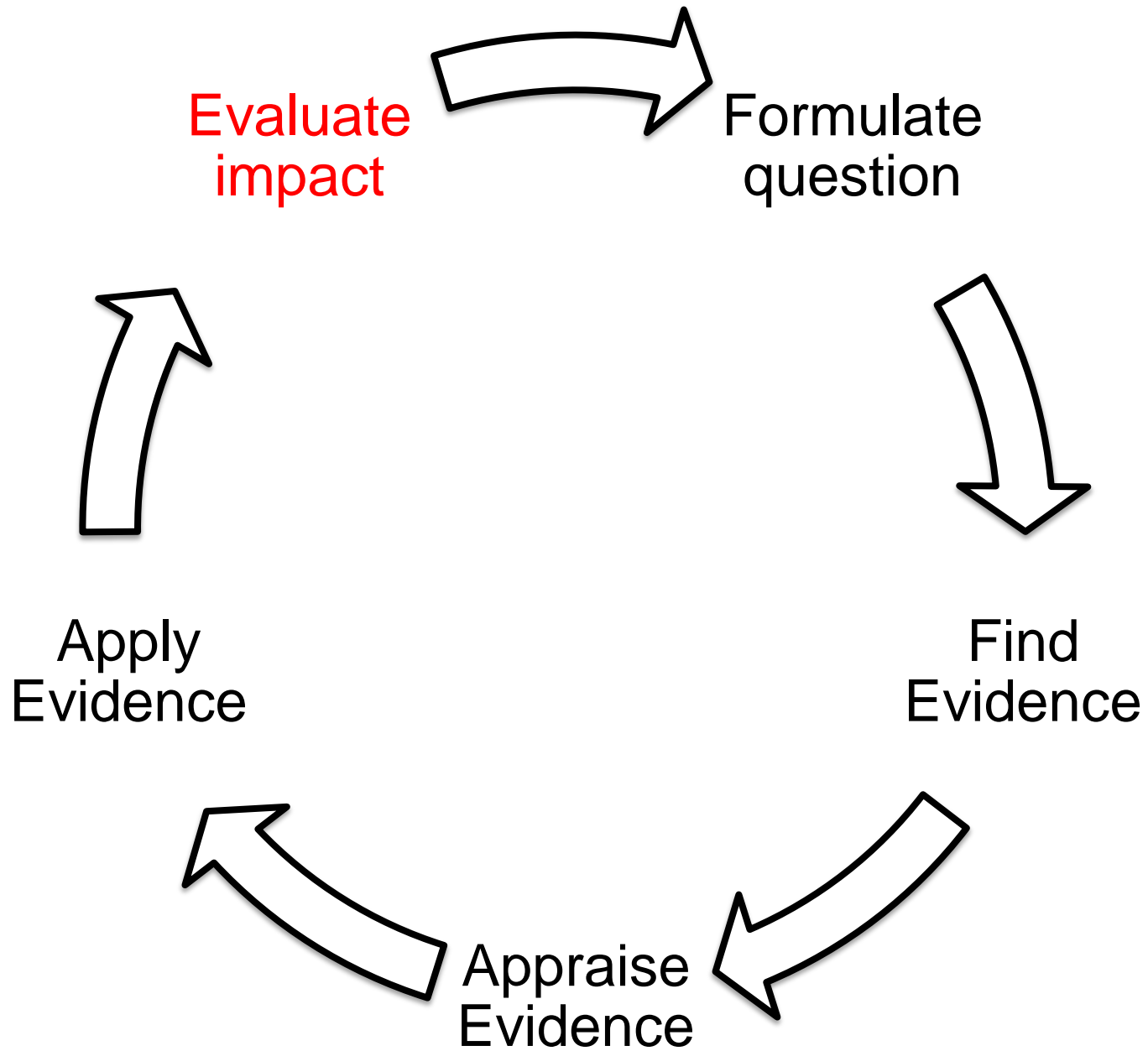Evaluate impact → Formulate question → Find Evidence → Appraise Evidence → Apply Evidence

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Evaluating Impact & Performance

- Evaluation will determine whether the change you introduced, modified, or cancelled made a difference and if it made the difference you expected.

- Evaluation will help you reflect on your performance as an evidence-based practitioner and hone your skills.

Applying EBP at 4 Levels

Oakleaf 2011

Using EBP in Course Integrated Instruction

Traditional

The Three Perceptual Channels

AUDITORY
Spoken words, sounds...
what is **heard** and **said**

KINESTHETIC
Emotions, actions,
movement, taste, smell...
what is **felt**

VISUAL
Printed materials, facial
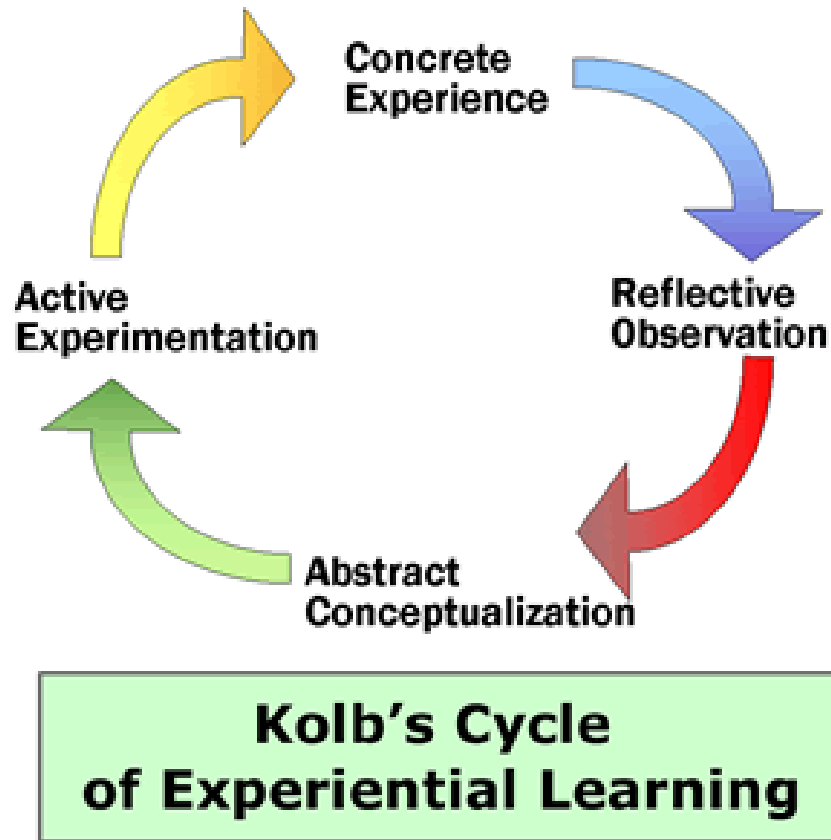expressions, body language...
what is **seen**

Kolb

Concrete Experience

Reflective Observation

Active Experimentation

Abstract Conceptualization

Kolb's Cycle of Experiential Learning

image by Karin Kirk

LEARNING STYLES

Feeling

ACCOMODATOR

DIVERGER

Doing

Watching
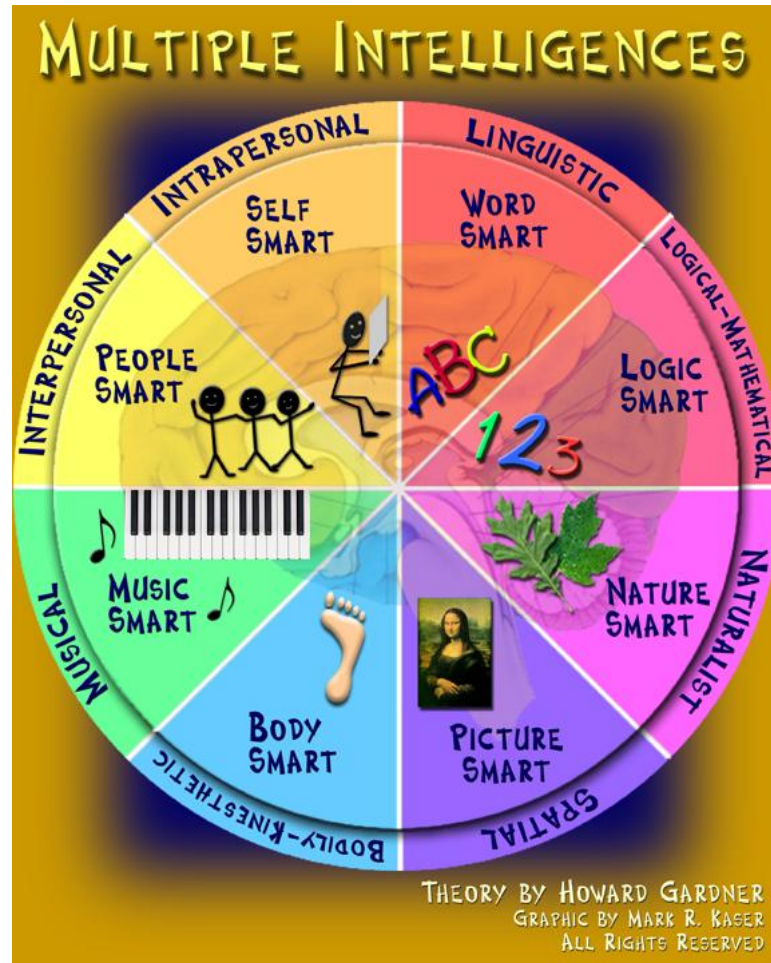
CONVERGER

ASSIMILATOR

Thinking

(Kolb 1981)

Ken Barger 2000
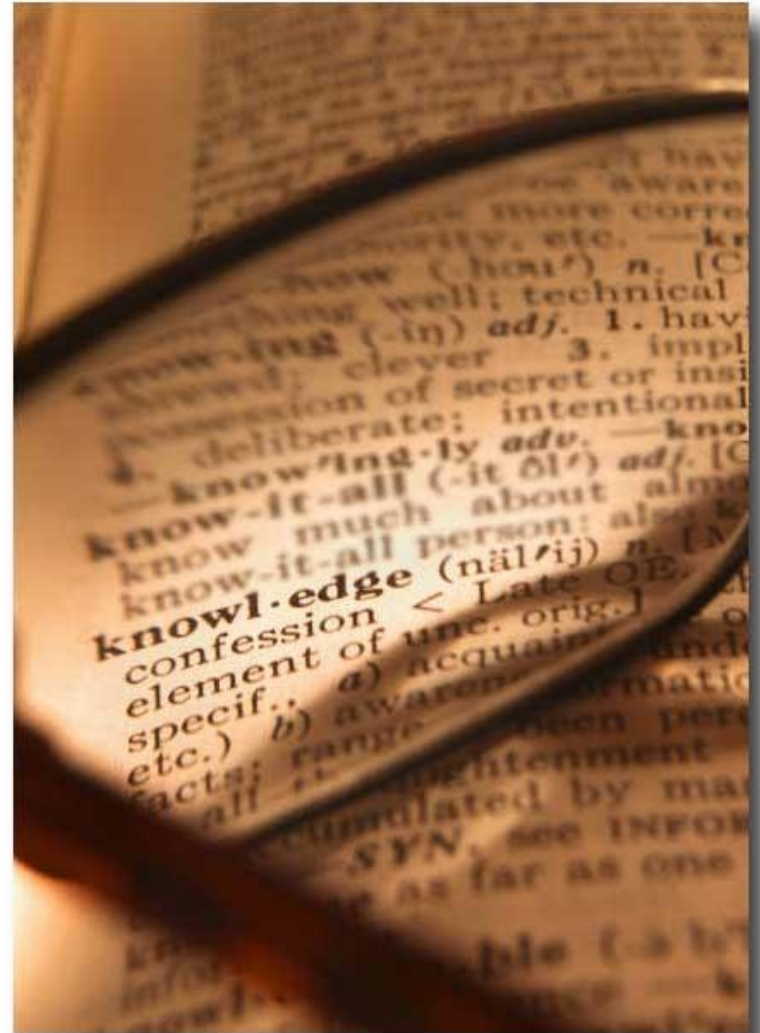
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Gardner

Cognitive Styles

- Perceptual modality preferences
- Field independence/dependence
- Constricted/flexible
- Tolerance for incongruous or unrealistic experiences
- Reflective/impulsive
- Abstract/concrete
- Innovator/adapter
- Broad/narrow
- Leveling/sharpening
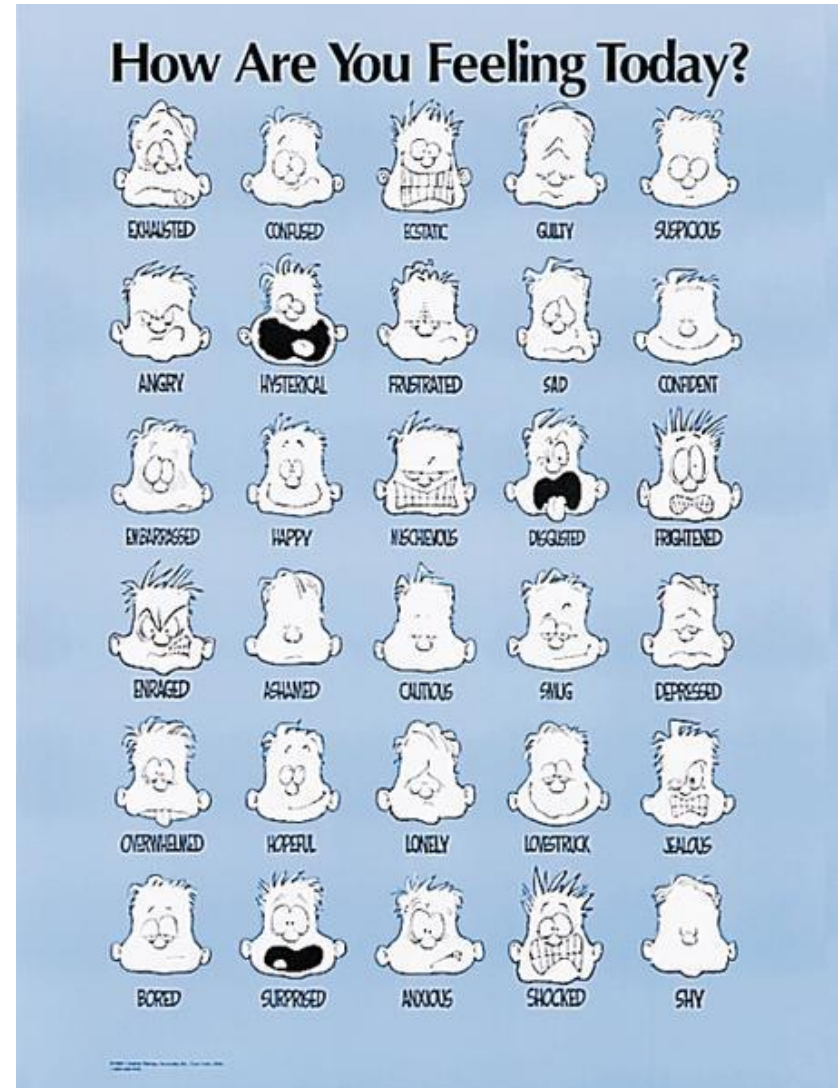- Converging/diverging
- Serialist/holistic

Cultural Diversity

Affective Styles

- Structural needs
- Curiosity
- Perseverance
- Frustration tolerance
- Anxiety
- Internal/external locus of control
- Intrinsically/extrinsically motivated
- Risk taking
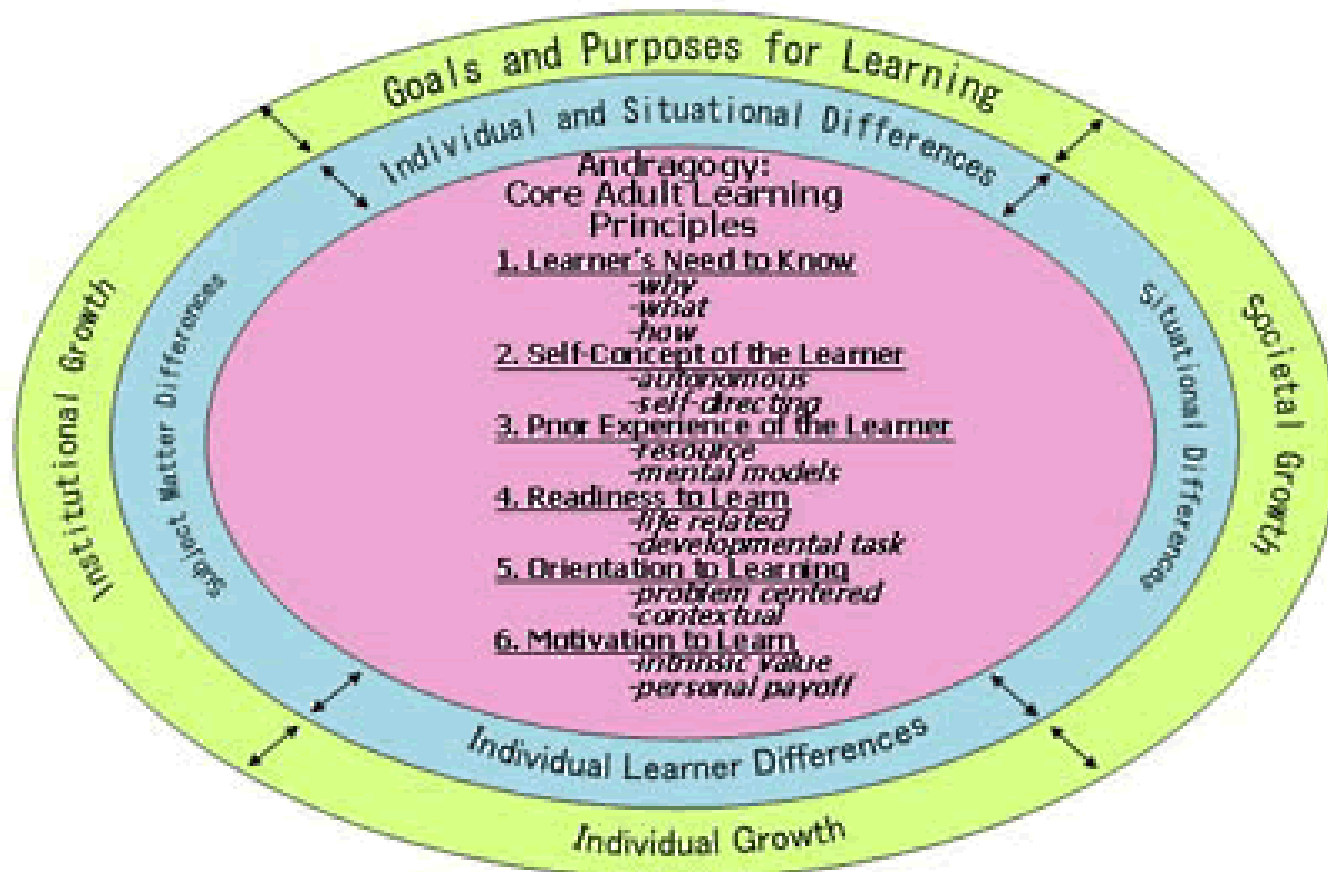- Competition/cooperation

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Physiological Styles

- Gender-related behavior
- Health
- Time of day rhythms
- Mobility needs
- Environmental factors
- Hemispheric factors

Adult Learning
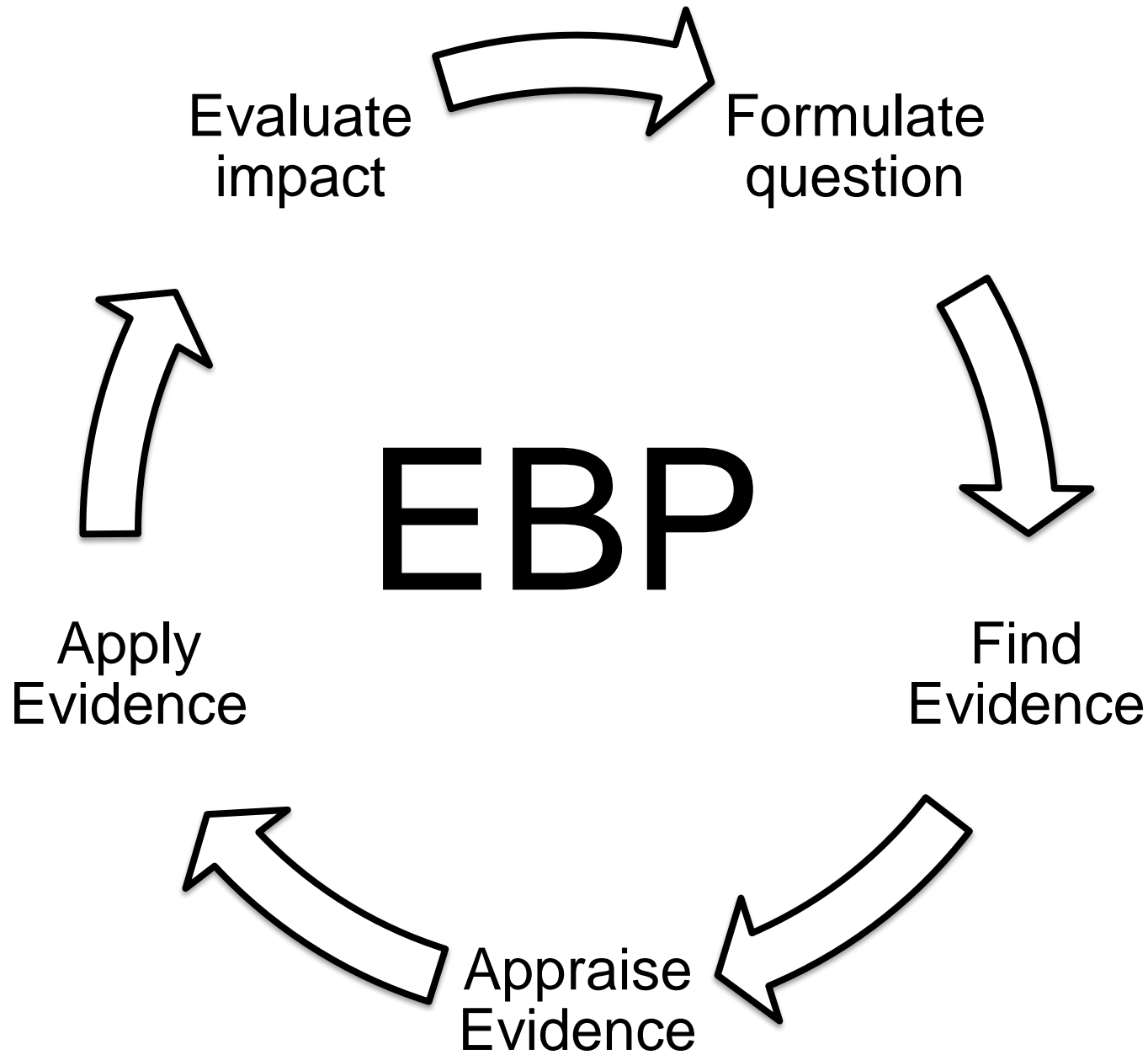

Andragogy in practice (Knowles, Holton, and Swanson, 1998).
Source: Malcolm S. Knowles, Elwood F. Holton III, Richard A. Swanson (2005). The Adult Learner, Sixth Edition, Elsevier Inc. p.4.

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Evaluate impact → Formulate question → Find Evidence → Appraise Evidence → Apply Evidence → (EBP cycle)

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Using EBP in
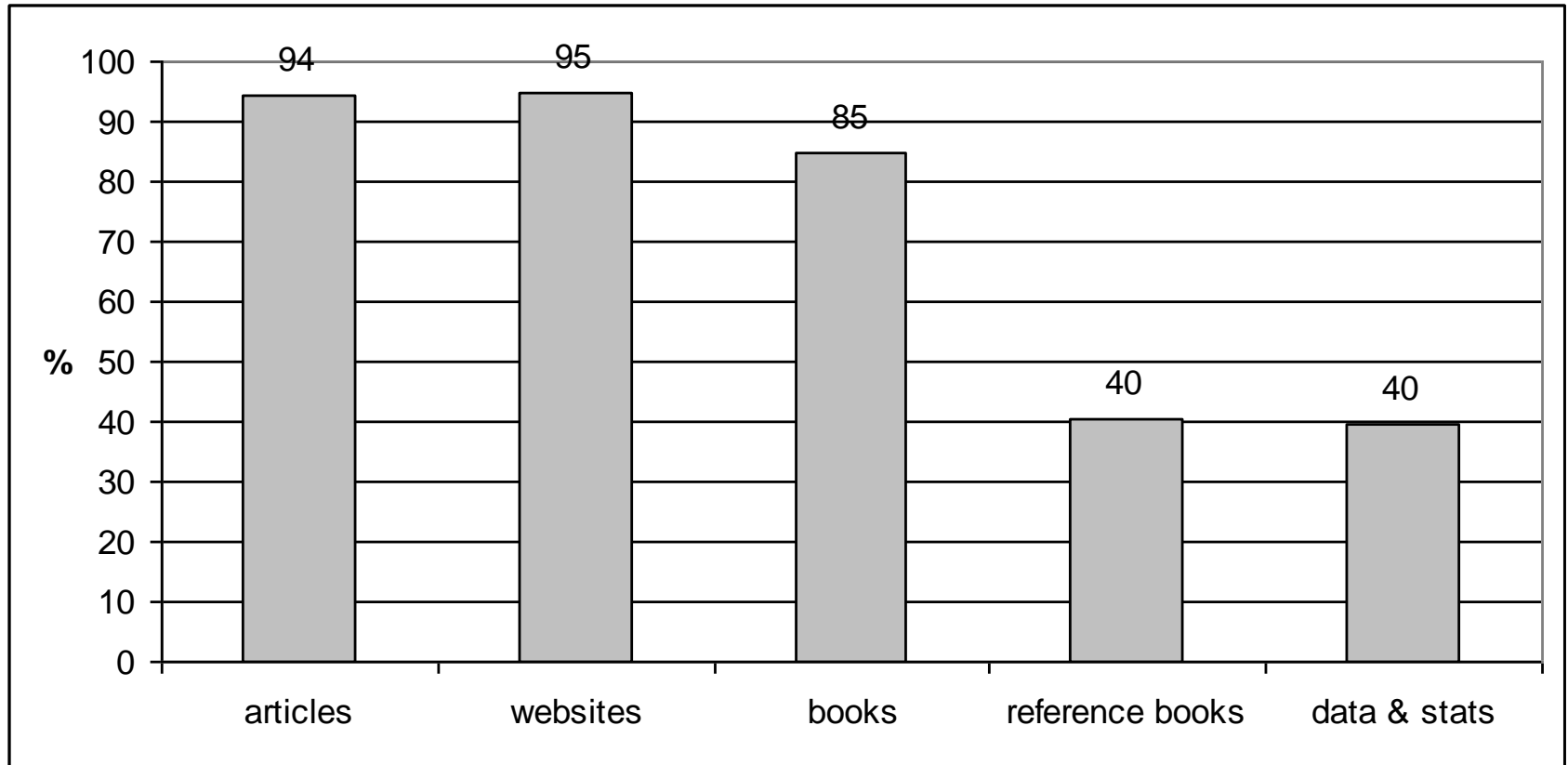# Curriculum Integrated Instruction

Digesting the Evidence

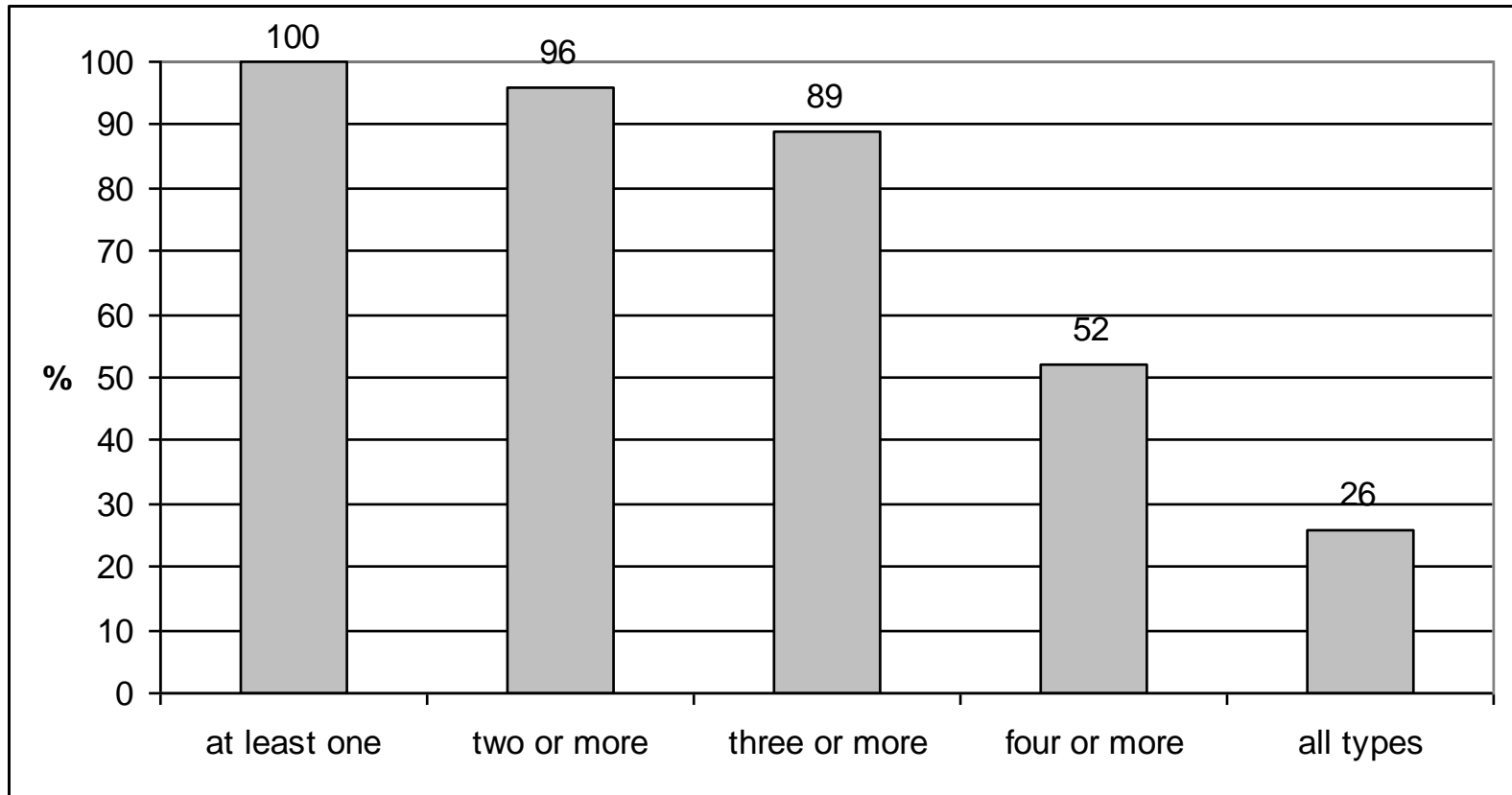## Resource Types 1st Semester, 1st Year Students Must Use

% of Students Required to Find Specific Resources Types When Complete Course Assignments Are Known

VanScoy, Amy and Megan Oakleaf. "Evidence vs. Anecdote: Using Syllabi to Plan Curriculum-Integrated Information Literacy Instruction." *College and Research Libraries*. 2008.

Digesting the Evidence

Number of Resources 1st Semester, 1st Year Students Must Use

% of Students Required to Find Multiple Resource Types When All Course Assignments Are Known

VanScoy, Amy and Megan Oakleaf. "Evidence vs. Anecdote: Using Syllabi to Plan Curriculum-Integrated Information Literacy Instruction." *College and Research Libraries*. 2008.

EBP at the Program Level

What's a program?

- Instructional structures
- Facilities
- Human resources
- Financial resources
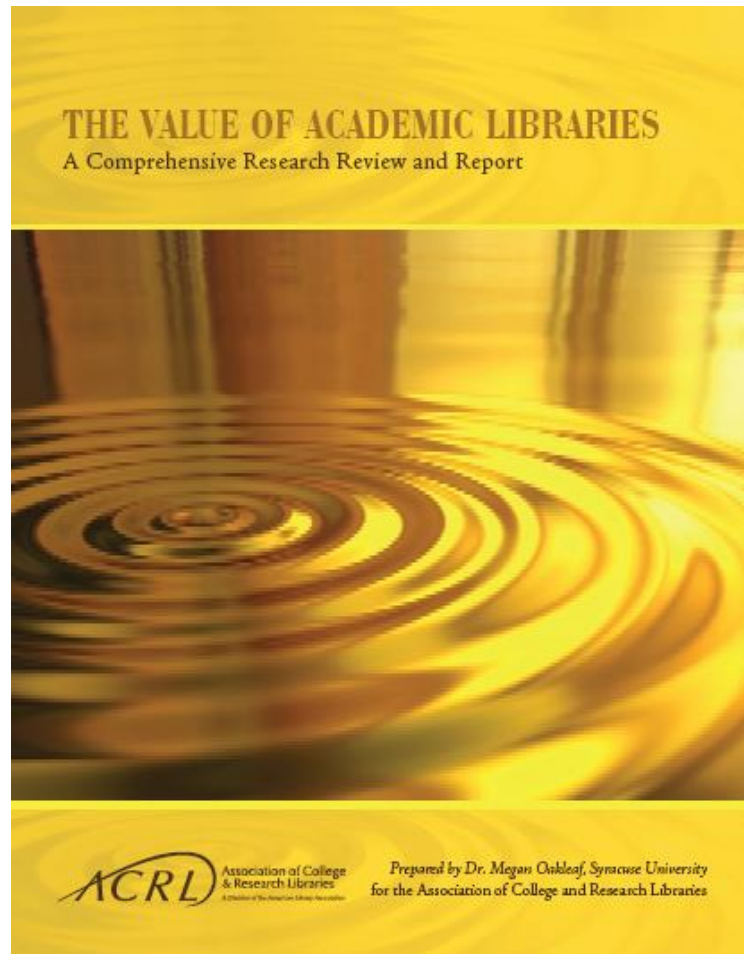- Support for professional development

EBP with an Institutional Perspective

The Value of Academic Libraries
Comprehensive Research Review & Report

Freely available online: http://www.acrl.ala.org/value/

Student Enrollment, Retention, & Graduation Rates

What do we know about the library's impact on these things?

How might we document & increase existing library impact?

- Graduation rates
- Recommendation of current students
- Fall-to-fall retention
- Matriculation of admitted students
- Recruitment of prospective students

Student Enrollment, Retention, & Graduation Rates
VAL Report p 32-35, 104-109

- ☑ Some studies correlate library use and retention, but no causative links.

- ☑ One facilities study links libraries to student recruitment.

- ❑ Increased librarian-student contacts → increased student retention & graduation

- ❑ Increase level of interaction in instructional activities?

- ❑ Increase expenditures?

- ❑ Court best admits → best matrics.

Student Success

What do we know about the library's impact on these things?

How might we document & increase existing library impact?

Internship success

Professional/ graduate school acceptance

Job salaries

Marketable skills

Job placement

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Student Success
VAL Report p 27, 110-114

❑Not many significant studies to date connecting libraries to student success.

❑Employers want their employees to have the skills librarians teach:

- critical thinking and analytical thinking skills (81% of employers);

- ability to analyze and solve complex problems (75%); and

- ability to locate, organize, and evaluate information from multiple sources (68%).

❑Support job placement?

Student Achievement & Learning

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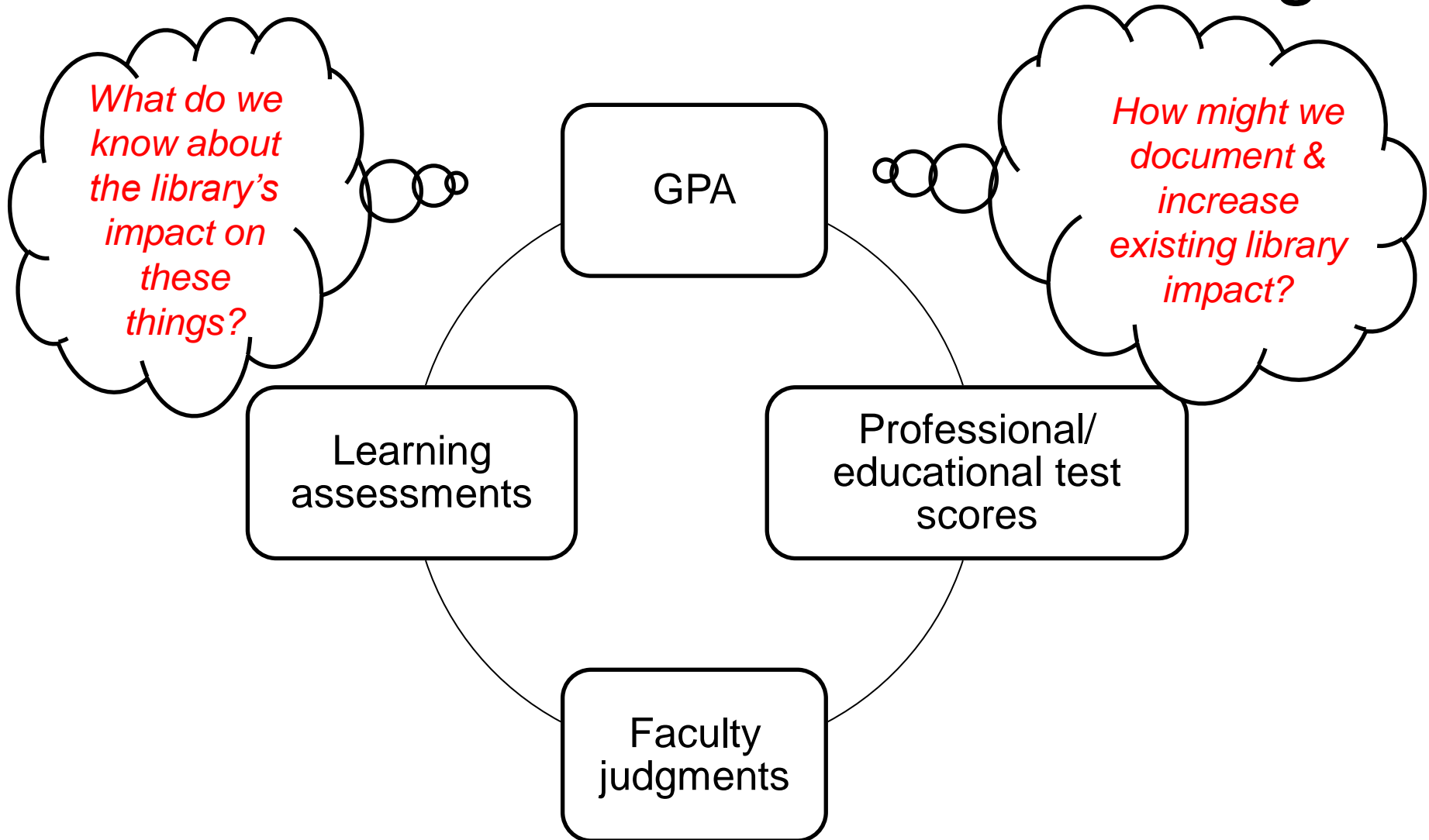
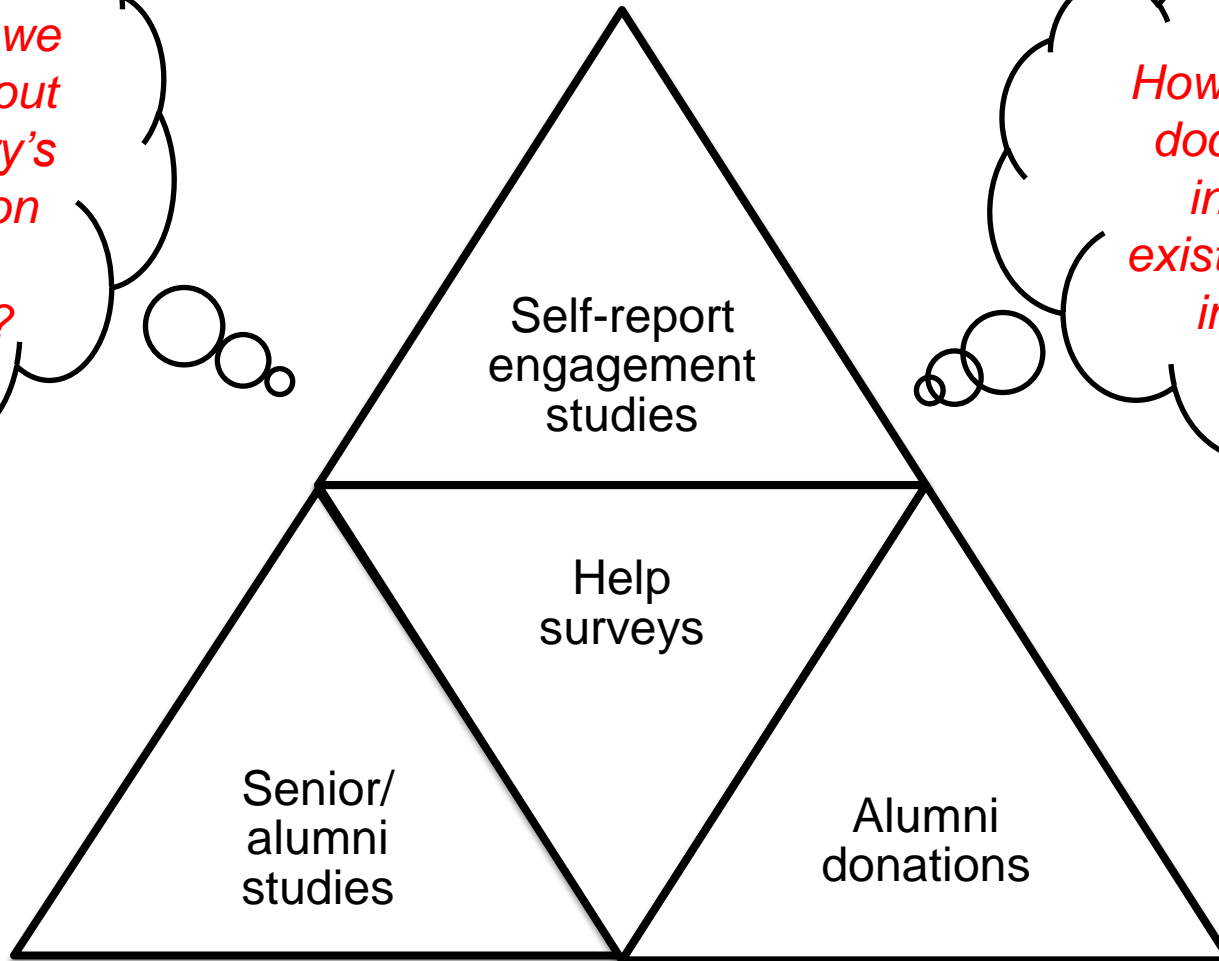# Student Achievement & Learning
VAL Report p 37-46, 115-120

☑ Many, many micro-level studies.

☑ One study – Used control groups to demonstrate that information literacy instruction resulted in higher GPAs, more semester hours completed, and more persistence.

❑ The easy-to-collect data is not revealing enough.

❑ Connect individual student library interactions with increased GPA or test scores?

❑ Conduct test audits?

❑ Employ assessment management systems to "roll up" what students learn by outcome?

Student Experience, Attitude, & Perception of Quality

What do we know about the library's impact on these things?

Self-report engagement studies

Help surveys

Senior/ alumni studies

Alumni donations

How might we document & increase existing library impact?

Student Experience, Attitude & Perception of Quality
VAL Report p 35-37, 121-129

- ☑ **Studies have identified "library-related" NSSE & CSEQ items.**
  - Some majors, demographic groups, and seniors engage in more library-related activities
  - Library-related activities "go hand-in-hand" with engagement in other areas
  - Academic support expenditures (including library expenditures) tend to correlate with increased engagement
  - Greater library resources correlates with critical thinking skills
  - Institutional academic challenge correlates with library use
- ☐ **No obvious causal relationships between libraries & these areas of institutional mission/interest.**
- ☐ Include more library-related items on student experience surveys?
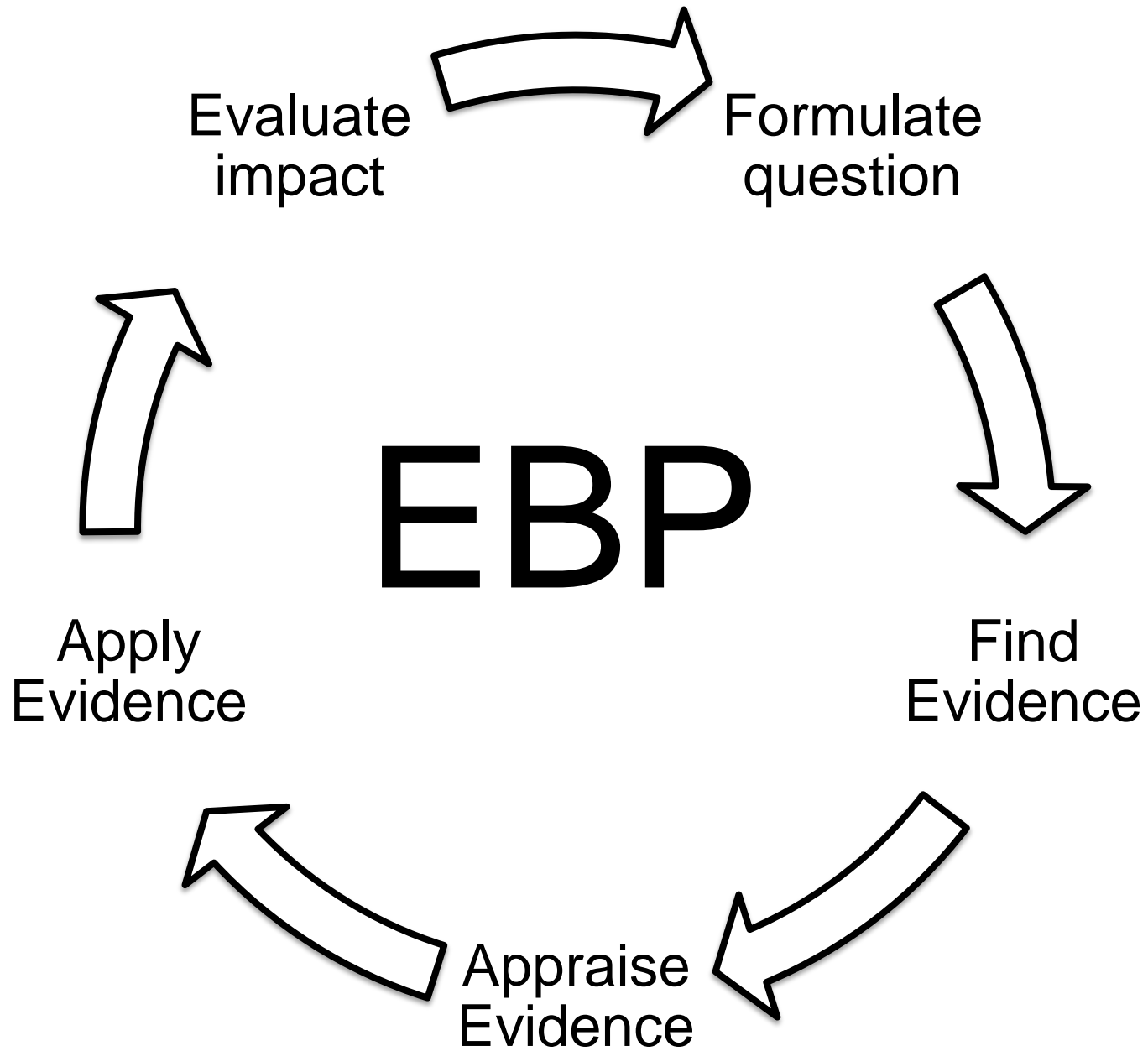- ☐ Conduct "help" studies? (i.e., Trinity University study, forthcoming)

Research Agenda

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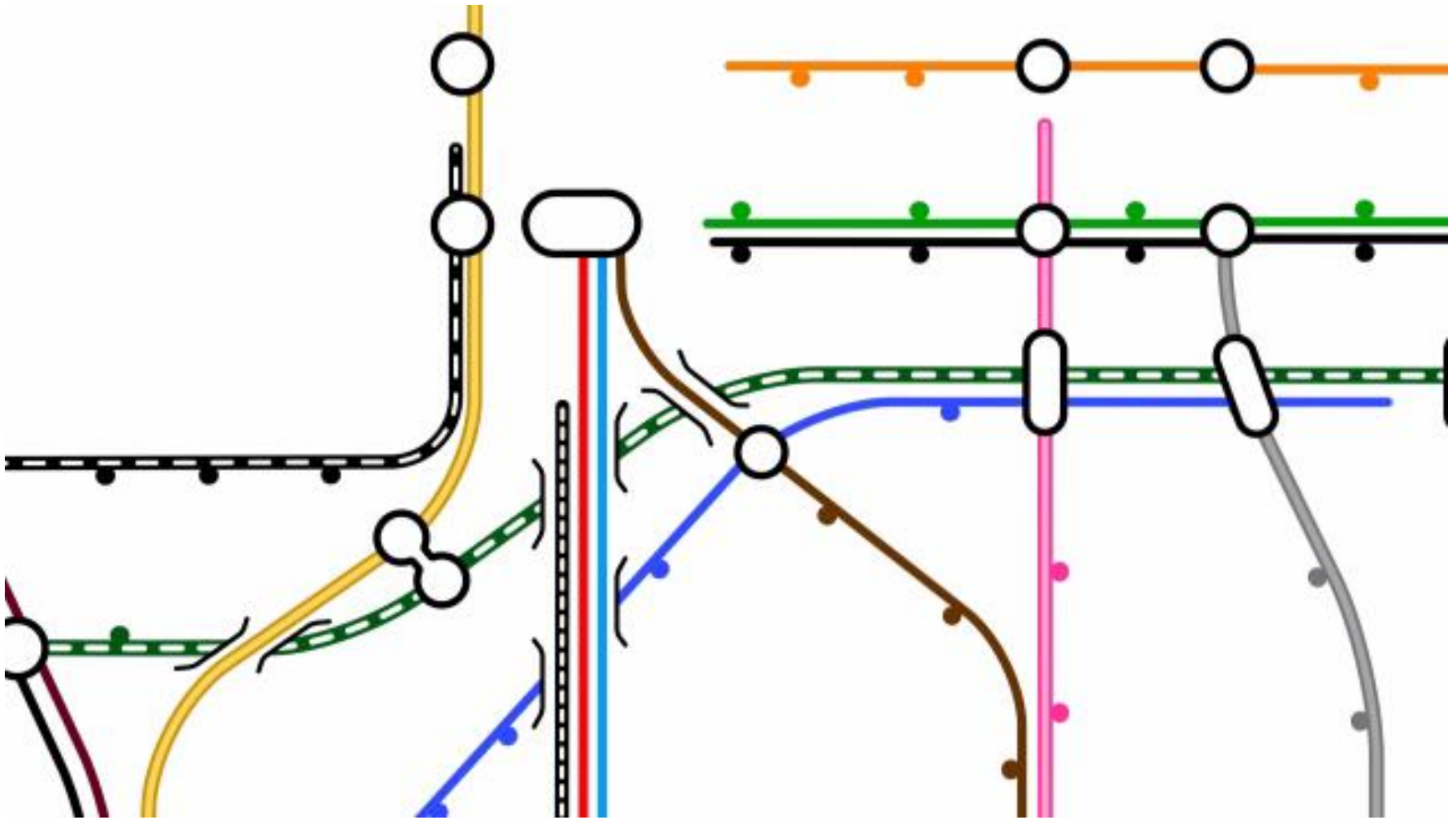
Using Data in Decision Making
Pfeffer and Sutton (2006) cited in Hiller and Self (2008)

What makes it hard to be evidence-based?

- There's too much evidence
- There's not enough good evidence
- The evidence doesn't quite apply
- People are trying to mislead you
- You are trying to mislead you
- The side effects outweigh the cure
- Stories can be more persuasive

How are you making decisions now?

Some Reasons Why Libraries Aren't Evidence-Based
Hiller and Self (2008)

- **Don't know what evidence to collect**
  - Few libraries understand or are skilled in basic research methods
- **Don't understand the evidence**
  - Few library staff have experience in data analysis
- **Don't know how to present the evidence**
  - Difficulty in identifying what is important and actionable
- **Don't want to use the evidence**
  - "We know what's best for our customers"
- **Difficulty using the evidence for positive change**
  - All of the above and organizational structure/culture

If not EBP…*what?*

Cognitive Bias

Biases Common to Libraries
Hiller and Self (2008)

- **Professional Deformation**
  - Viewing a situation through the common perceptions of one's profession rather than by taking a broader perspective.
- **Halo or Horns Effect**
  - Allowing another person's positive or negative characteristics to affect perception of this person in other unrelated contexts.
- **Perseverance of Belief**
  - To persist in believing previously acquired information even after it has been discredited
- **Wishful Thinking**
  - Assessing a situation incompletely according to a desired rather than a likely outcome
- **Worst-Case Scenario**
  - Emphasizing or exaggerating possible negative outcomes disproportionate to all possible outcomes
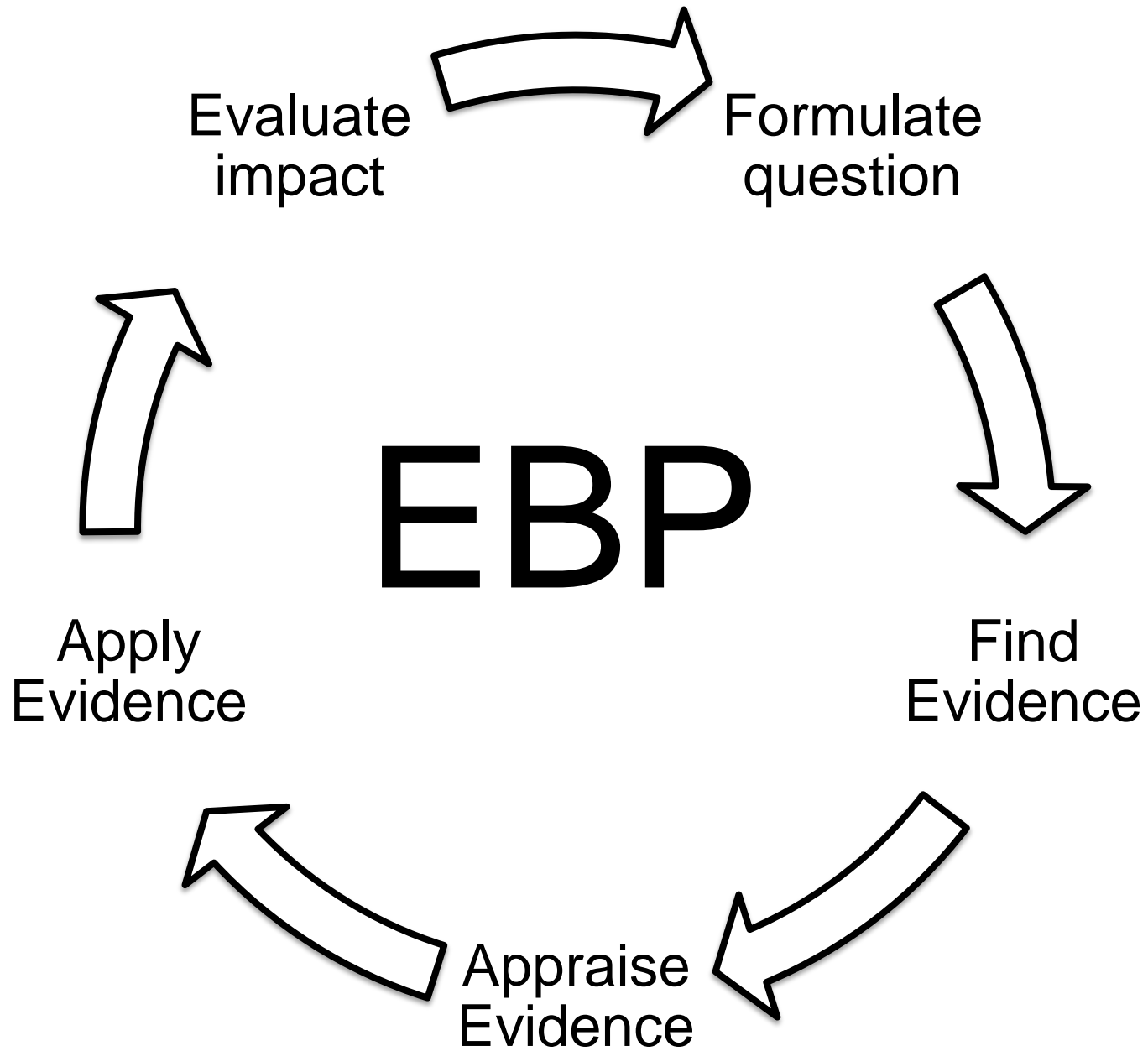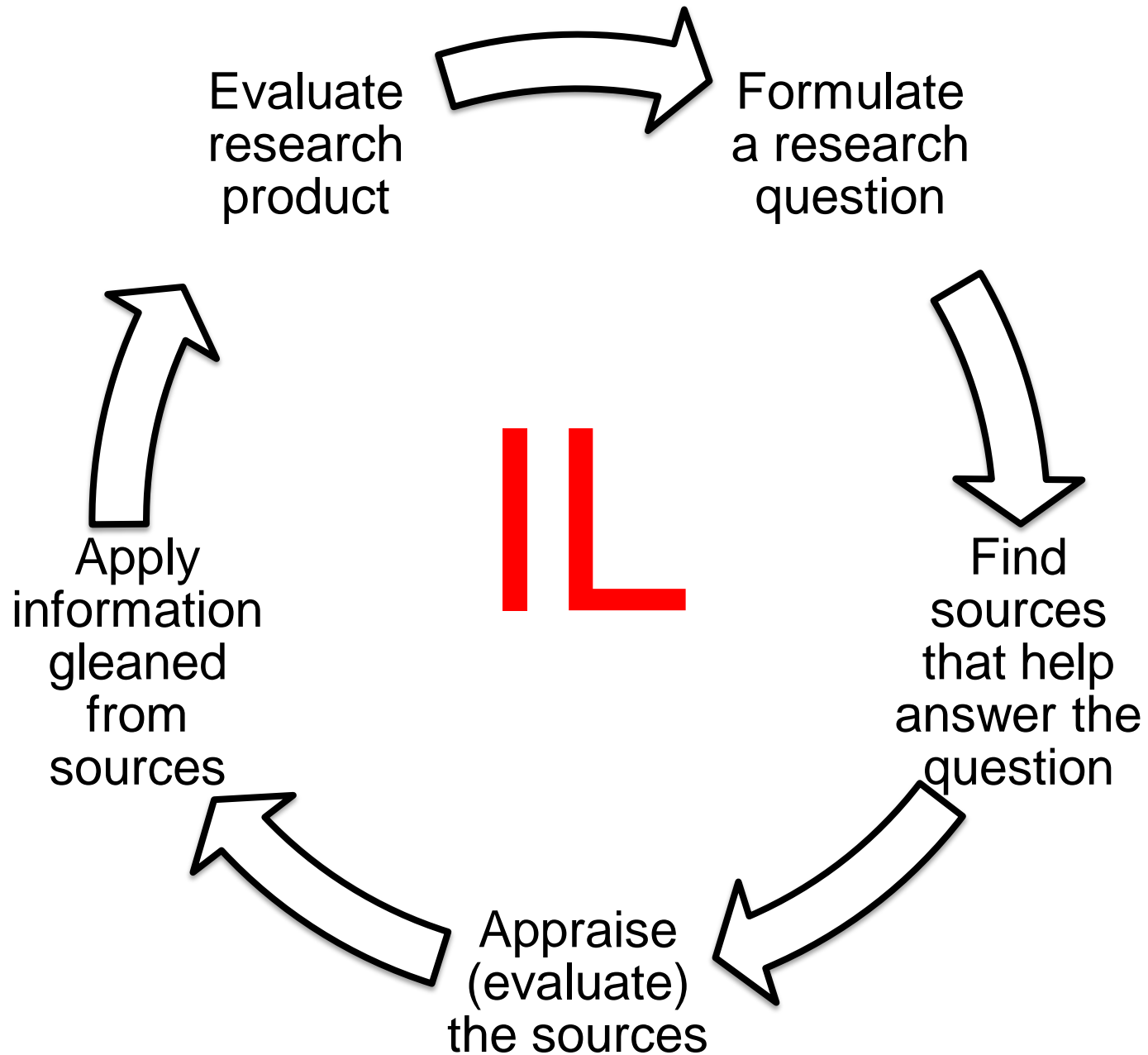
How do you combat cognitive biases?

How is EBP Like IL?

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Evaluate impact → Formulate question → Find Evidence → Appraise Evidence → Apply Evidence

EBP

Evaluate research product

Formulate a research question

Find sources that help answer the question

Appraise (evaluate) the sources

Apply information gleaned from sources

IL

Thank you!

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