

One Shot at a Time

Using the Topic of Vaccine Hesitancy to
Introduce the Importance of Critical
Evaluation to Undergraduate Students in
an Introductory Biology Course

CCLI 2020 – Lighting Talk

May 29, 2020

Michael Yonezawa



ABOUT ME

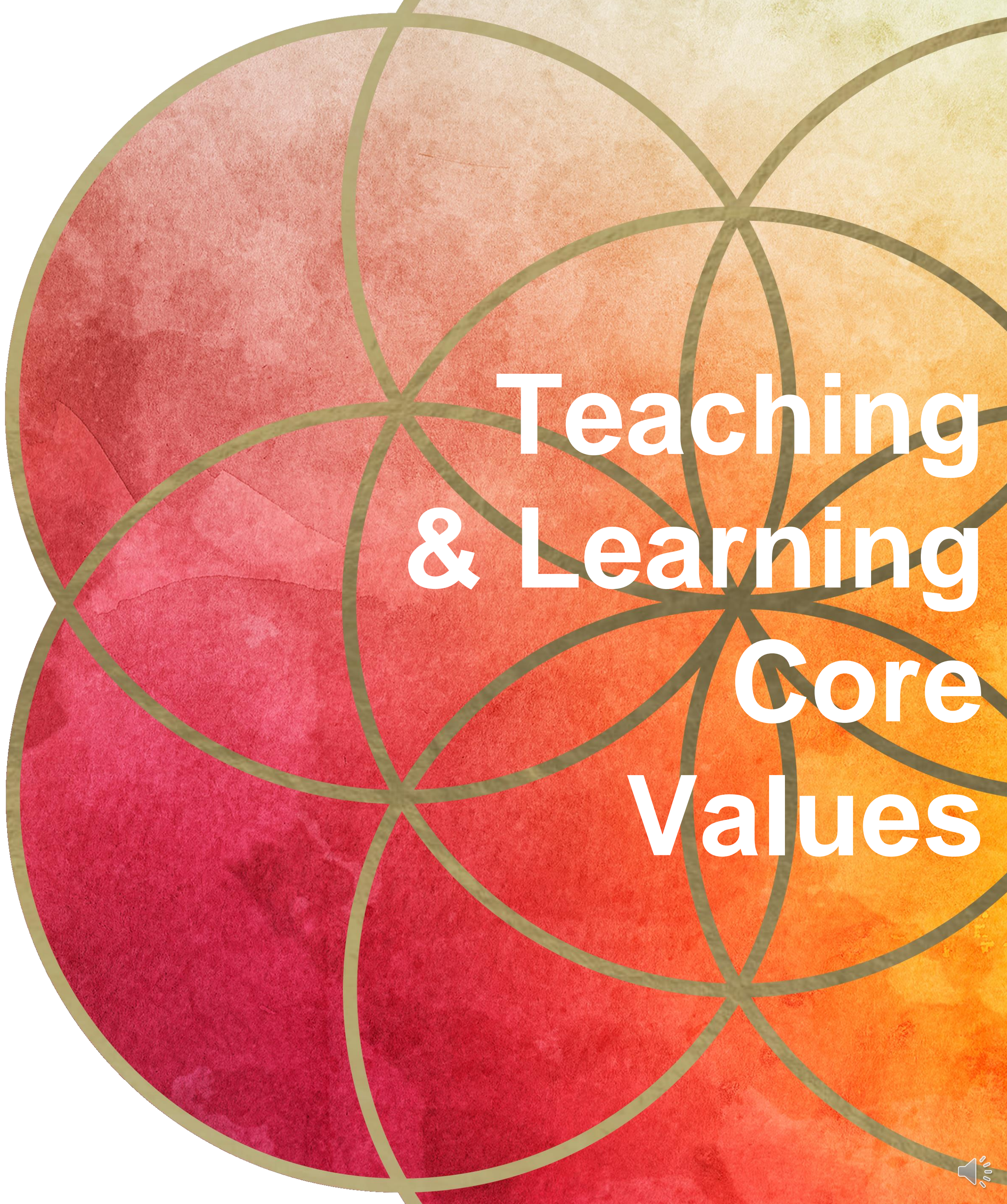
My key responsibility as the Early Experience Teaching Librarian is to provide curricular and co-curricular support to gateway courses, including courses in the University Writing Program and entry-level courses in the sciences, humanities, and social sciences. I earned a B.A. in History from the University of California, Irvine, '90 and an M.L.I.S. from the University of California, Los Angeles, '95. And have been with UCR since 1999.



WHO WE ARE?

The UCR Library Teaching & Learning Services department centers our work around student success:

- We encourage curiosity and lifelong learning.
- We aim to identify, develop, and teach resources and tools to help learners thrive in their research-focused coursework.
- Our methods are grounded in evidence-based best practices in response to changing learner needs and learning environments.
- We strive to be reflective in our learner-centered pedagogical approaches and encourage and support creative approaches to teaching information literacy.



Teaching
& Learning
Core
Values



COURSE-RELATED INSTRUCTION

Library instruction sessions introduce students to a variety of information sources, effective strategies for conducting research, and the ethical use of information.

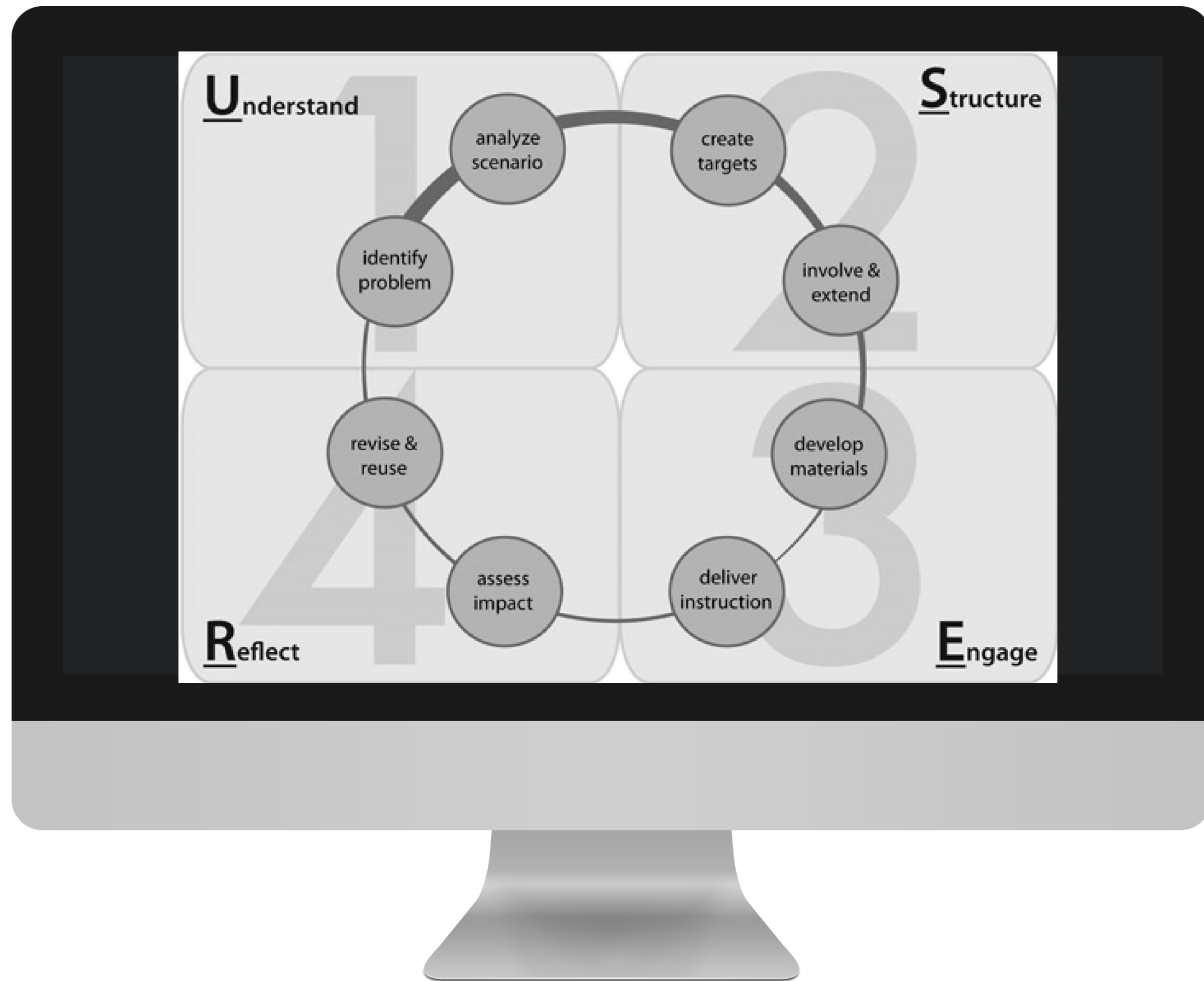
- Every session tailored to specific course outcomes
- Held in a computer lab or active learning space
- Ideally a collaboration with the course instructor and the librarian
- Runs the gamut from individual basic writing courses to large enrollment course such as business, history, biology labs, chemistry labs, etc.

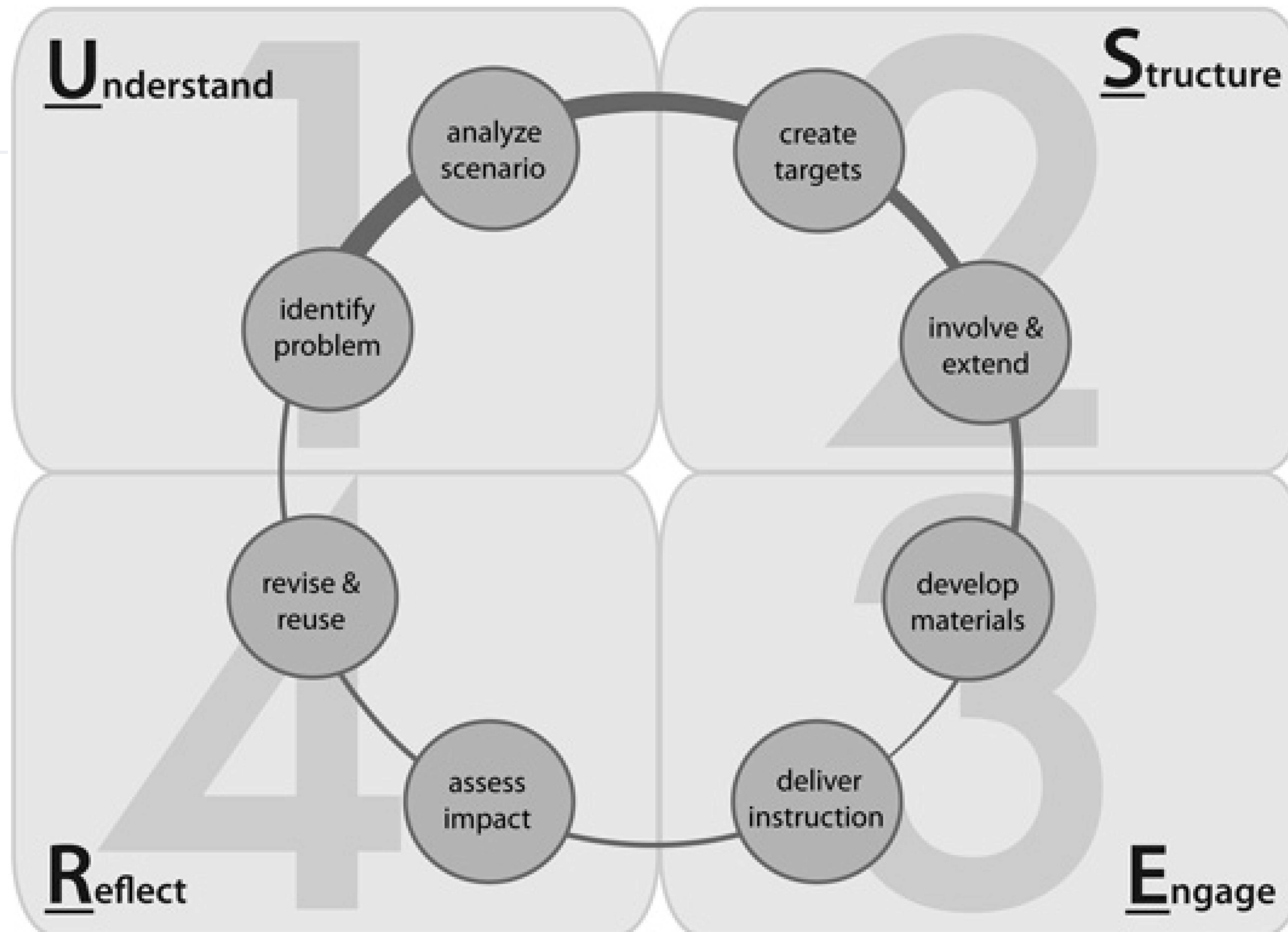


USER Model

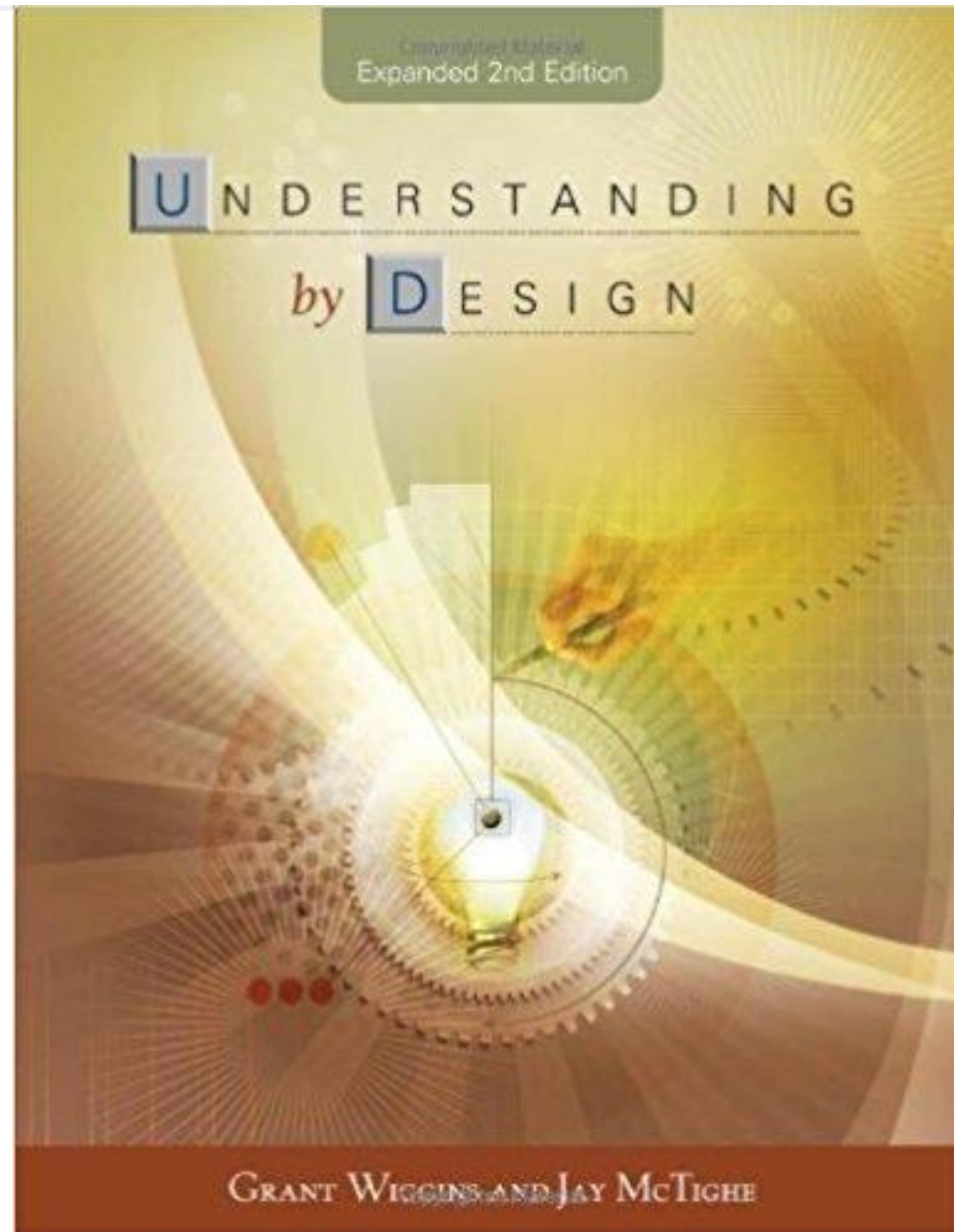
Booth, Char. "*Build Your Own Instructional Literacy*." *American Libraries* 41.6/7 (2010): 40-43.

Booth, Char. *Reflective Teaching, Effective Learning: Instructional literacy for library educators*. Chicago: American Library Association, 2011.





BACKWARD DESIGN



Backward design as an iterative and creative process that ideally involves ongoing reflection and revision.

The three stages of backward design are:

1. Identify learning outcomes
2. Determine evidence and assessment
3. Design learning activities

Wiggins, Grant P., and Jay McTighe.
Understanding by Design, Expanded 2nd Edition.
Alexandria, VA: Association for Supervision and
Curriculum Development, 2005.



Background History

4 DECADES OF SUPPORT

- Library support began in 1979, with 250 students in a single quarter
- Today now Biology 5LA is being offered year-round, including during summer session, with 1,400-1,600 students per academic year.

COMPUTER-ASSISTED INSTRUCTION

- Transition to online tutorial in early 1990s
- Cooper, J. (1993). Using CAI to teach library skills. *College & Research Libraries News*, 54(2), 75-78.
doi:<https://doi.org/10.5860/crln.54.2.75>

Background History

LIBRARY RESEARCH FOR BIOLOGY

2014-PRESENT

- iLearn **Library Academy** (LMS) tutorials created in 2014-2015
- Biology 5LA modules consisting of videos and four exercises/quizzes to assess the learner and utilized badging to recognized mastery of the content.

2017-2018

- Fall 2017 - Introduction of News Literacy
- Spring 2018 - Biology 5LA News Literacy Evaluation Project Data Collection I (n=436)
- Fall 2018 - Biology 5LA News Literacy Evaluation Project Data Collection II (n=224)

RESEARCH STUDY

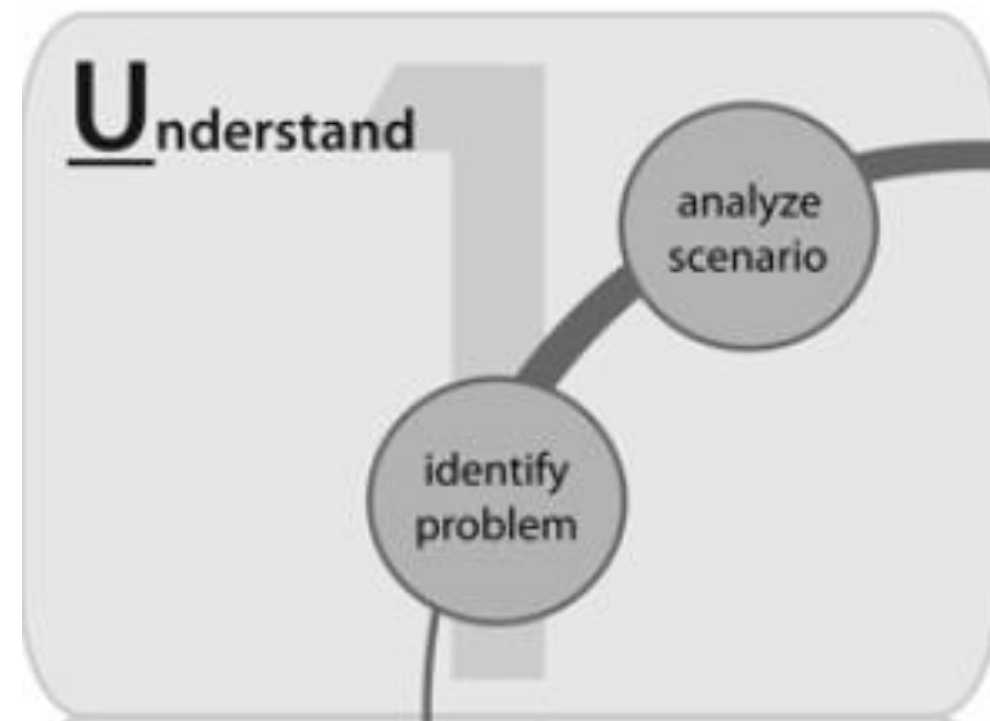
WHAT IS THE IMPACT & EFFECTIVENESS OF OUR INSTRUCTION?

Research data collected in a Biology 5LA News Literacy Evaluation Project indicated what was being presented to our students, was not contributing to new knowledge and skills. Data analysis opened the door for a new direction in the lesson plan.

Changes were not made in isolation and included an intentional effort to restructure our various entry level instruction courses to develop a scaffolded information literacy pathway.



REDESIGN LESSON PLAN



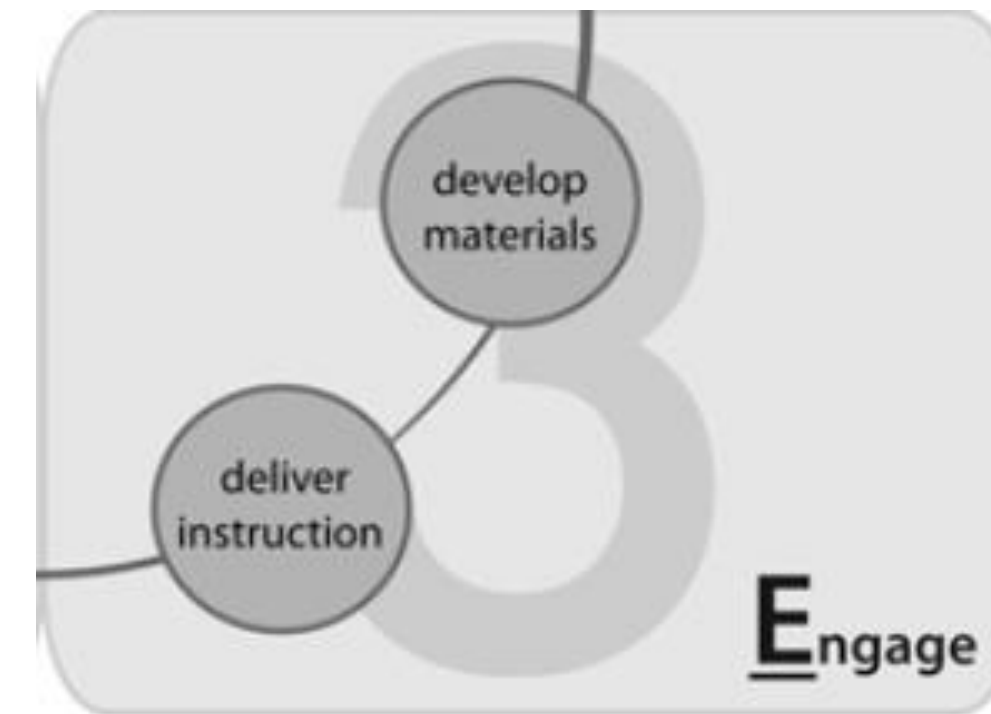
**UNDERSTAND HOW TO
EVALUATE SOURCES OF
INFORMATION**

**IDENTIFY DIFFERENT
LEARNING ENVIRONMENTS**



**DEVELOP
LEARNING GOALS,
OBJECTIVES, &
OUTCOMES**

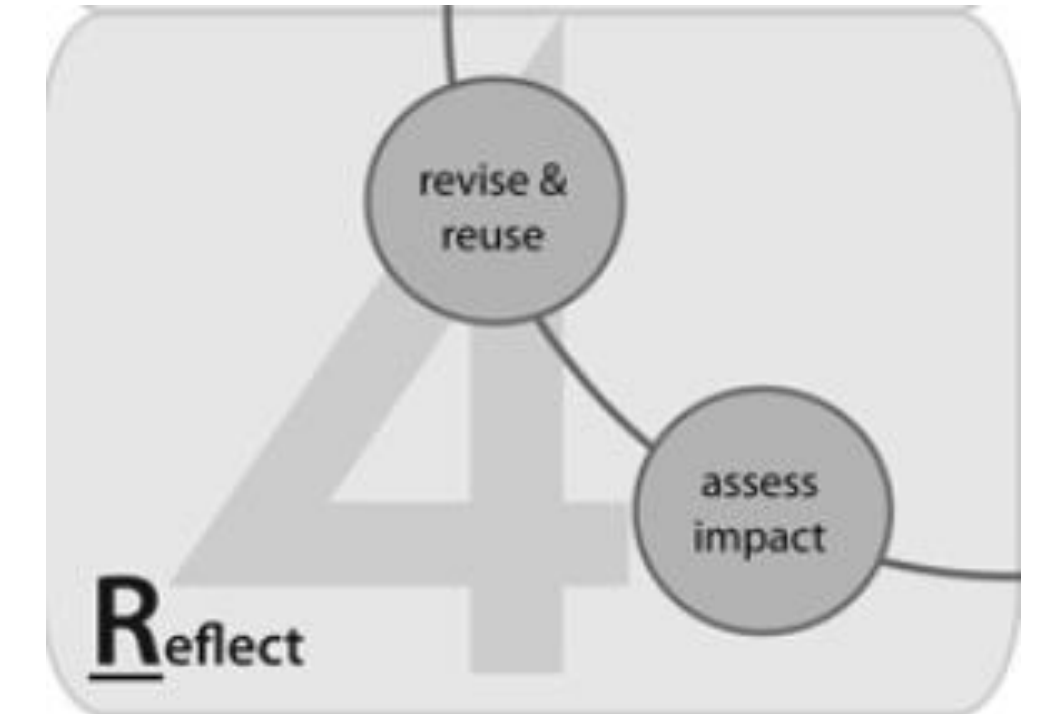
**IDENTIFY AVAILABLE
TOOLS & RESOURCES**



**AUTHENTIC
LEARNING**

PROTOTYPE

**DEPLOY THE LESSON
PLAN**



COLLECT DATA

ASSESS

REVISE, REUSE, REPEAT



THE NEW LESSON PLAN VACCINE HESITANCY



TIMELY



**AUTHENTIC &
ACTIVE LEARNING**



**PLENTY OF
MIS/INFORMATION
SOURCES**



LESSON PLAN

Bio 5LA Lesson Plan


Learning outcomes:

- Students will begin to be able to identify the purpose and audience of potential sources of information
- Students will begin to be able to select from a variety of evaluation criteria in order to identify the most relevant sources for their needs
- Students will recognize the importance of using relevant, authoritative, and accurate sources of information

Assessment plan:

- Students participate in a brief verbal conversation to identify where they would typically look for medical/health related information to establish some common sources
- In class discussion about the importance of evaluating not only the information itself but the source of the information
- Student take a quick post-test to determine what criterion they would consider to be the most important when evaluating scholarly information sources for a research project.
- Student evaluation worksheets in Qualtrics will be reviewed to see if they are able to identify and answer the majority of the questions

Introduction	Welcome to the Library (http://bit.ly/Bio5LAwelcome). Students signed in and turned in a copy (or show a picture) of their BIO5LA Library Academy Badge/Certificate. Students complete informational section of the Qualtrics form. Instructions for Latecomers (http://bit.ly/Bio5LA-Late) (http://bit.ly/BIO5LAs20) Students will be instructed to STOP after selecting their TA. Discuss the learning outcomes of the lesson plan and how it will directly relate to a future assignment in lab and more importantly to their future academic and professional careers.	Time 4 minutes
Transition	<i>These days, finding information is not as difficult as it was 10, 15, 20 years ago. The problem now is sifting through all the information out there to find the most relevant, reliable, credible, authoritative, and update sources of information. For example, where do you typically go to look for information about a medical/health related question? Another related example would be to ask the students to think about where they go to obtain their medicine (both over-the-counter as well as prescription medication)</i>	Time 1 minute
Pre-Assessment	Students participate in a brief informal conversation to identify where they would typically look for medical/health related information to establish some common sources.	Time 5 minutes

		Time 10 minutes
Teaching Strategy 1	<p>Now we'll take a closer look at a few of the sources of information referenced in the Vaccine Hesitancy Wikipedia article. Students will be introduced to the topic of Vaccine Hesitancy by visiting Wikipedia.</p> <p>Have a brief conversation with the students about the history and on-going debate over vaccinations; point out specific features of the entry:</p> <ol style="list-style-type: none"> 1) What is the lock icon in the upper right hand side of the webpage; click on the  image to view the Wikipedia: Protection Policy page. 2) Explore the Page Information link (left side under Tools) 3) The numerous in-text references cited throughout the article 4) References and Further reading section 5) External links <ul style="list-style-type: none"> • Conduct brief demonstrations on how to evaluate at least two (2) different types of information sources. Use the examples to model to the students how to use the Qualtrics evaluation form (http://bit.ly/BIO5LAs20). TIP: The evaluation form allows users to evaluate up to 3 sources in one session; they need to evaluate at least one source. <ul style="list-style-type: none"> • Largent, M. (2012). Vaccine the Debate in Modern America. Baltimore: Johns Hopkins University Press. • TIP: The title is linked to Primo and the publisher is linked to its website. • ShotsforSchool Retrieved June 12, 2019, from https://www.shotsforschool.org/ • Keeping up with your vaccinations. (2011). Harvard Women's Health Watch, 18(8), 2–3. • TIP: Use Academic Search Complete to help facilitate the evaluation of the article. Search for the article by TITLE and display the detailed record. Point out how, unlike Google Scholar, the library database separates the information into different fields for easier understanding and comprehension. Try clicking on the title of the journal from the detailed record display to view publication details about the journal. TIP: Not all the journal articles provided to the students are indexed in ACS; students can try and use a different 	

	index such as WoS or Google Scholar to explore these articles. TIP: Use UC-eLinks to demonstrate to the students how to access the full-text of the article.	
Transition	Now <i>it's</i> your turn to evaluate a few more possible sources of information related to this topic of vaccine hesitancy. Optional: You can work independently or in small groups of 2-4 students. Return to the Qualtrics Evaluation Survey you started at the beginning of the instruction session. Next, open a new browser or tab and go to Vaccine Hesitancy Sources of Information (you should display page 2 of the Welcome message: http://bit.ly/Bio5LAwelcome). Please evaluate at least one (1) source of information from each of the three category types of information: Internet, Books/Book Chapters, and Journal Articles. If you are working together you must still individually complete the evaluation questions for each of the three (3) sources you have selected. (Inclusive)	Time 1 minute
Teaching Strategy 3	Students can work independently or in small groups of 2-4 students to evaluate a variety of information sources. Students should open the Vaccine Hesitancy Sources of Information Google Sheet in a new browser or tab. Students should be instructed to return to the Qualtrics form (http://bit.ly/BIO5LAs20) to evaluate one source of information from each of the three category types. TIP: remind students that they can and should search the catalog, database, the Internet, etc. for the information source they are evaluating as they try and answer each of the questions. Active learning activity variation: Students can choose to work independently, however, students should be encouraged to work collaboratively as they apply the various methods demonstrated to them by the librarians in Teaching Strategy #2.	Time 20 minutes
Post-Assessment	Please go to http://bit.ly/bio5LApoll and respond to the poll question (you should display page 3 of the Welcome message: http://bit.ly/Bio5LAwelcome). [Give the students enough time to participate in the poll; 2 minutes should be plenty of time for students to respond to the questions then go to http://bit.ly/pollevBio5LA-Results to view the live results of the poll. NOTE: the poll will run continuously throughout the quarter so the total number of responses will increase with each library session and not be reset]	Time 5 minutes
Comprehension Check	Brief conversation about the importance of evaluating not only the information itself but where, who, when, and why the information was created in the first place and the importance of relevance to the information seeker.	Time 4 minutes



UPDATE TOPIC

Spring 2020

SARS-CoV-2

Rapid Redesign

Remote Asynchronous

**CREATE NEW
LEARNING OBJECTS**

CREATE NEW ASSESSMENT

FEEDBACK



Future Revisions

Continuous Assessment,
Revision, Reuse

Utilizing Universal Design for
Learning (UDL) and Critical
Pedagogy

EQUITY

INCLUSION

SOCIAL JUSTICE



Thank You!

