



Taking Active Learning to the Next Level:

Increasing Student Engagement by Blending Face-to-Face
Instruction and Digital Learning Objects

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PART ONE

On the road to developing hybrid instruction

INSTRUCTIONAL CHALLENGE

1273
FIRST YEAR STUDENTS

72
ONE-SHOTS

6
LIBRARIANS

2 Course Assignments

Annotated Bibliography & Research Journal



Students need to find the appropriate sources



Students need to critically evaluate sources

THE HYBRID APPROACH BLENDS...



Face-to-Face Instruction



Computer-Mediated Instruction

BLENDING INSTRUCTION

HOMEWORK



Research Strategies Tutorial

IN-CLASS



Discussion



Active Learning



PART TWO

Increasing student engagement with gamification

IS IT ACTIVE?

ACTIVE LEARNING

EXPERIENCES

Doing
Observing

REFLECTION

On what one is learning and
how one is learning
Alone & with others

RECEIVING INFORMATION AND IDEAS

PASSIVE LEARNING

Diagram reproduced from Fink, L. Dee. Creating Significant Learning Experiences. 2003.

EVALUATING SOURCES WORKSHEET

- Students were paired up and given a source to evaluate
- Using the worksheet the student pairs answered questions about the source they were given
- Discussion with the librarian after completing the worksheet

Rhetorical Arts: Source Matrix Exercise

	Example	Source 1
Type of Source (scholarly, popular, or trade?)	Opinion Piece in a book. Publisher is leader in high school publishing market.	
Primary, Secondary or Tertiary?	Secondary	
Authority of Author	ExxonMobil	
Rationale/Motive for Writing/Bias	Bias towards the gas industry (author has a vested interest)	
Position on Main Idea A Cite evidence that supports or disputes this statement: "Fracking increases water pollution."	<ul style="list-style-type: none"> ▪ safe since 1940's ▪ natural gas= environmentally responsible Natural gas = cleaner-burning energy source	
Position on Main Idea B Cite evidence that supports or disputes this statement: "Fracking is	<ul style="list-style-type: none"> ▪ Exxon supports public disclosure of fracking chemicals 	

FORMATIVE ASSESSMENT

- Librarian Peer Observation
- Low completion rates for the worksheet



“Lack of Student Engagement”

RADAR Game

- Students were paired up and given a source to evaluate ➡
- Using the resources in the course LibGuide and **hints** in the RADAR Game the student pairs answered questions about the source they were given
- Discussion with the librarian after completing the RADAR Game

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SOURCE:

Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing

Stephen G. Osborn, Avner Vengosh, Nathaniel R. Warner and Robert B. Jackson
Author Affiliations

- Center on Global Change, Nicholas School of the Environment,
- Division of Earth and Ocean Sciences, Nicholas School of the Environment
- Biology Department, Duke University, Durham, NC 27708

Proceedings of the National Academy of Sciences of the United States of America

Vol. 108, No. 20 (May 17, 2011), pp. 8172-8176
Published by: National Academy of Sciences
<<http://www.jstor.org/action/showPublisher?publisherCode=nas>>
DOI: 10.2307/25830023
Stable URL:
<http://www.jstor.org/stable/25830023>

Directional drilling and hydraulic-fracturing

★ = 3 ★ = 1 ★ = 0

THIS QUESTION HELPS DETERMINE AUTHORITY

How many times has this source been cited by others?

*HINT: USE GOOGLE SCHOLAR TO FIND OUT THE NUMBER OF TIMES CITED

UNDER 100 TIMES

100-200 TIMES

OVER 200 TIMES

SUBMIT ANSWER

GAMIFICATION

- Incorporating Friendly Competition (points)
- Motivational Feedback (stars)
- Measure Progress (showing star count)
- Reward effort (getting the answer right on the first try earns more points)

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Rationale Date Relevance

Authority Accuracy



DOES YOUR TEAM HAVE THE MOST PRECISE RADAR
IN THE CLASS? WE ARE ABOUT TO FIND OUT!

CONTINUE -->

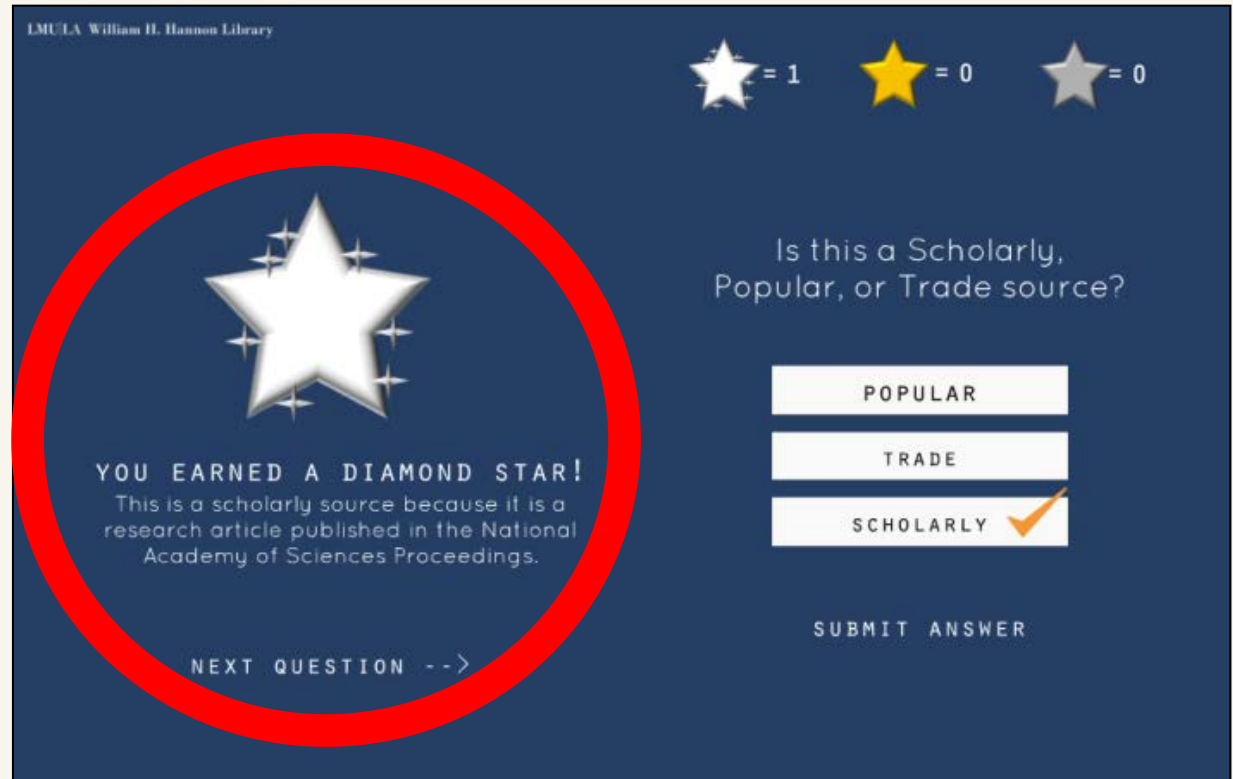
GAMIFICATION

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- Measure Progress (showing star count)
- Reward effort (getting the answer right on the first try earns more points)



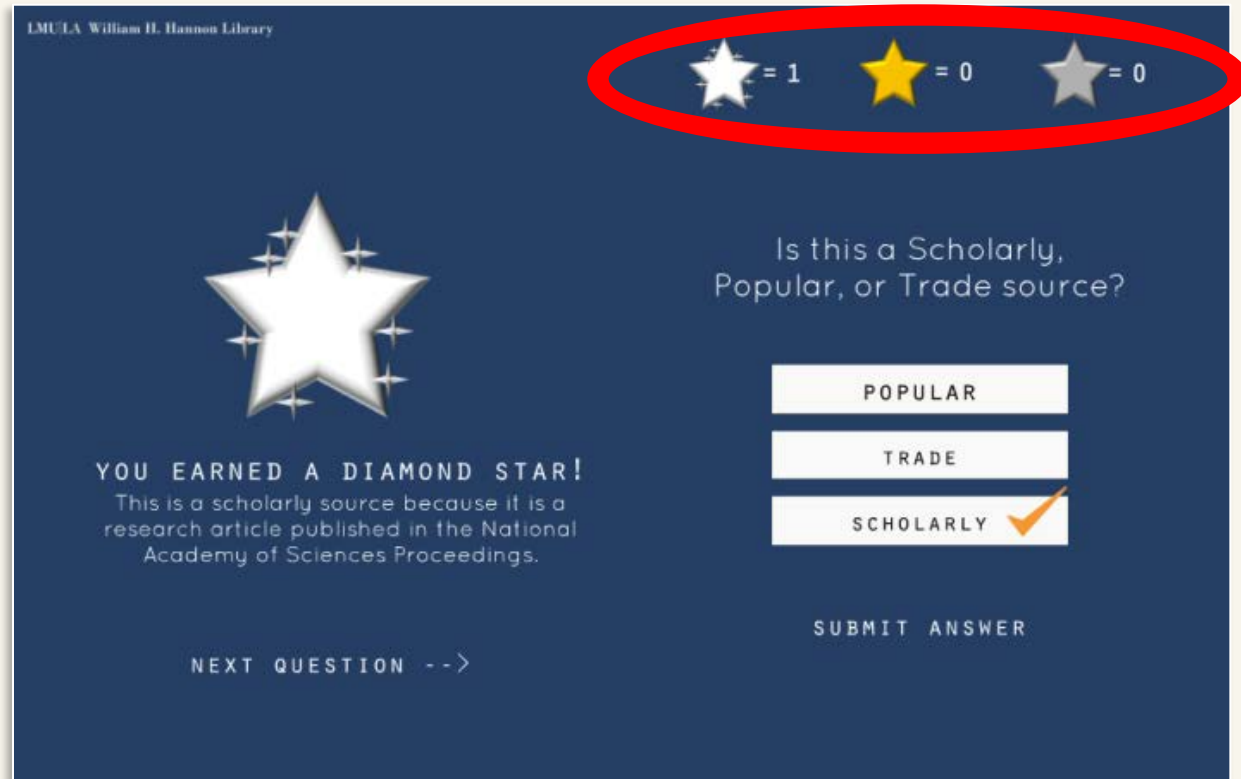
GAMIFICATION

- Incorporating Friendly Competition (points)
- **Motivational Feedback (stars)**
- Measure Progress (showing star count)
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GAMIFICATION

- Incorporating Friendly Competition (points)
- Motivational Feedback (stars)
- Measure Progress (showing star count)
- **Reward effort (getting the answer right on the first try earns more points)**



Earn a Diamond Star if you answer the question correctly on the first try. Diamond Stars are each worth 100 points.



Earn a Gold Star if you answer the question correctly on the second try. Gold Stars are each worth 50 points.



Earn a Silver Star if you answer the question correctly on the third try. Silver Stars are each worth 25 points.



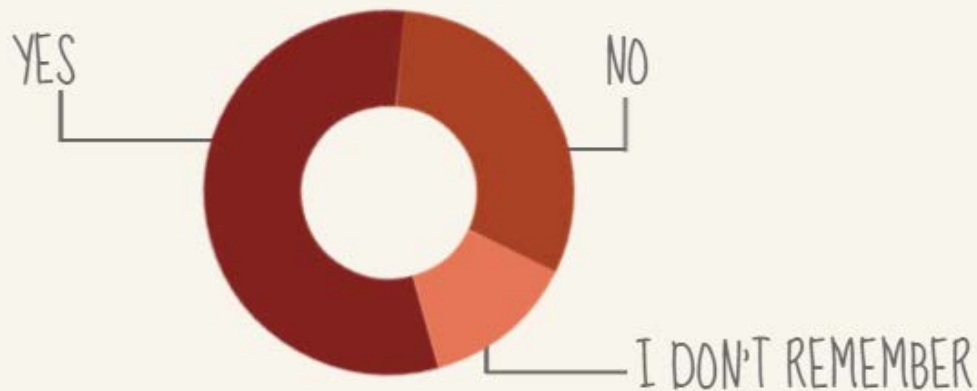
PART THREE

Student & Librarian Survey Results

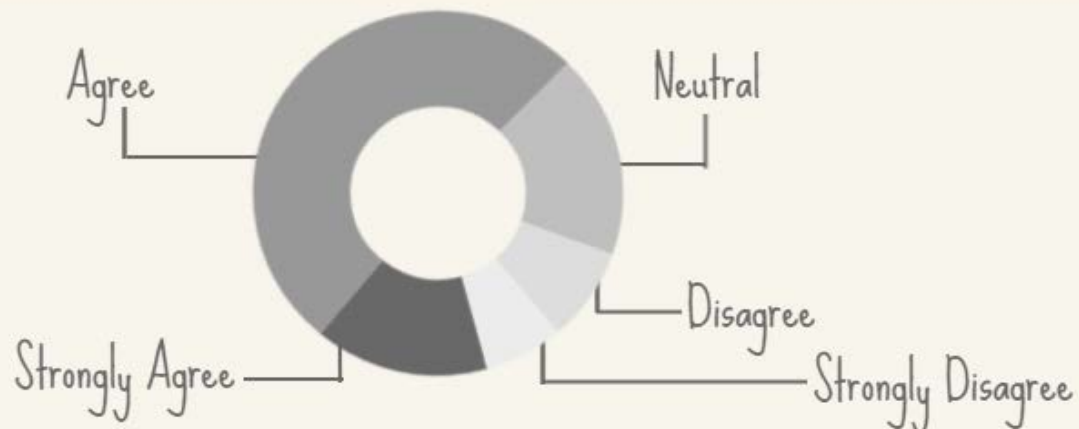
RADAR GAME

STUDENT SURVEY RESULTS

Did you play the RADAR Game during your library visit?



The RADAR Game helped me evaluate sources.



RADAR GAME

STUDENT SURVEY RESULTS

What did you like about the RADAR Game?



32

Total Responses



WHAT THE STUDENTS SAID

"It made learning how to evaluate sources fun!"

"It gave you practical experience to test your knowledge about evaluating sources. It was hands on and showed you how much you really know and understand what you are doing."

"It was fun and actually extremely informative"

"It made it fun to play with a partner and I'm competitive; the stars helped me to actually try."

"I liked winning and getting the different stars."

"It was a fun and interactive way to understand/determine and become familiar with the various types of sources."

RADAR GAME

LIBRARIAN SURVEY RESULTS

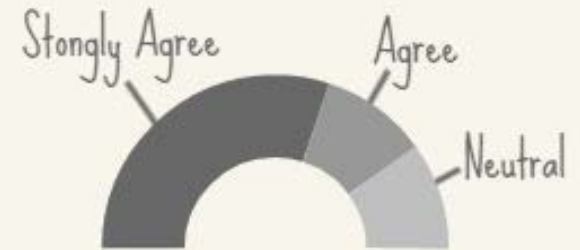
RATING THE RADAR GAME



The RADAR Game increased student engagement.



The RADAR Game increased student participation during the class discussion.



The RADAR Game increased the quality of class discussions.

100%

of librarians surveyed "Strongly Agreed"

The RADAR Game
increased student motivation.

RADAR GAME

LIBRARIAN SURVEY RESULTS

What was the most useful thing that resulted from incorporating the RADAR Game into your library instruction session(s)?

"Participation was definitely better and more enthusiastic. Also, the 'cool' aspect. Students were impressed that the library was able to create this game just for them."

"The discussion that occurred after the exercise was greatly improved. Student were really clear on what they didn't get right in the game and they asked more direct questions about what confused them."

"Students do their own work and don't sit there and do nothing at all, which happens with handout exercises."

"It made the class go faster and captured the attention of the students. By doing the game first, they seemed more attentive in the second half of class, which involved the database demo."

ADDITIONAL MATERIALS

ONLINE LEARNING OBJECTS

- RADAR GAME
- RESEARCH STRATEGIES

FLIPPED CLASSROOMS

- ASSESSING GAMES-BASED LEARNING IN INSTRUCTION
- THE FLIPPED CLASSROOM FOR LIBRARY INSTRUCTION
- KEEPING UP WITH FLIPPED CLASSROOMS: AMERICAN LIBRARY ASSOCIATION
- KEEPING UP WITH... GAMIFICATION: AMERICAN LIBRARY ASSOCIATION

ONLINE RESOURCES

- PRIMO
- MERLOT
- ACTIVE LEARNING LIBGUIDE
- TUTORIAL DESIGN RECOMMENDATIONS
- ARTICULATE TECH SPECIFICATIONS

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