

THE AMAZING LIBRARY RACE

Using Problem-Based Learning and Assessment in Library Orientations

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Setting



Background

- Instruction program successfully embedded at the freshmen-level: 1300 students/year reached
- Orientation Seminar (OS) classes chosen for the Amazing Library Race
 - Classes consist of students new to university life
 - Often students' first contact with the library

Problem-Based Learning

- Knowledge is acquired through exploration and problem-solving
- Activities strive to integrate new knowledge with existing knowledge
- Problem-based learning places students at the forefront of their learning process; contrasts with traditional passive learning techniques

The Amazing Library Race

Development and Implementation

Learning Outcomes

- Provide general information about collections and services
- Foster connections between:
 - Students and library faculty
 - Students and their peers (increase retention)
- Increase the library's social media presence
- Have fun! An alternative to lecture-based instruction

Development of the ALR

- Adapted from Katherine O' Clair's "Amazing Library Race"
- Covers online research, circulation department, media center, and reference desk
- Exciting, competitive, interactive, informative

Rules of the Game

1. Assemble students in teams of 3-4
2. Make sure one person per group has smartphone or iPad
3. Distribute answer sheets and direct each team to create a name
4. Each leg of the race has its own envelope with tasks
5. Each task must be completed correctly before proceeding
6. Distribute prizes for winning team

Leg 1: Online Research

1. Look in the library catalog for any books written by Jay-Z. Write down the call number of the book.
2. What is an LIU Academic Libraries of Brooklyn (ALB) card, and what can you do with it? Name four places you can use this card.
3. This is an MLA citation for an academic journal article. Identify the article title, journal title, and author:

Marrou, Chris. "Our Gal Snooki." *American Scholar* 81.3 (2012): 5. *Academic Search Premier*. Web. 6 Sept. 2012.

Leg 2: Circulation

1. Complete this mysterious library Mad Lib about textbooks on reserve.

Reserve books cannot leave the _____ (number) floor. You will need to have your _____ (noun) in order to check out a Reserve book. Checking out library books is very _____ (adjective).

(Hint: see Circulation Desk)

Leg 2: Circulation

2. Make your way to the 5th floor Circulation department. Locate a book near this call number: **DT 61**, in the stacks. Write down the title of your chosen book.

Using the blank sheet of paper on the back of your answer sheet, draw a picture of what you think the cover of the book should look like based upon its title.

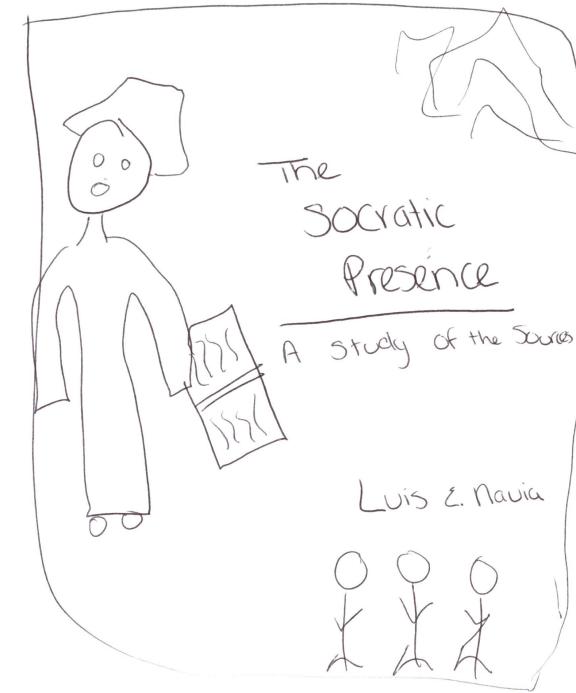
Bring this picture to the instruction lab to proceed to the next leg of the race.

Leg 2: Circulation

Drawing paper



Drawing paper



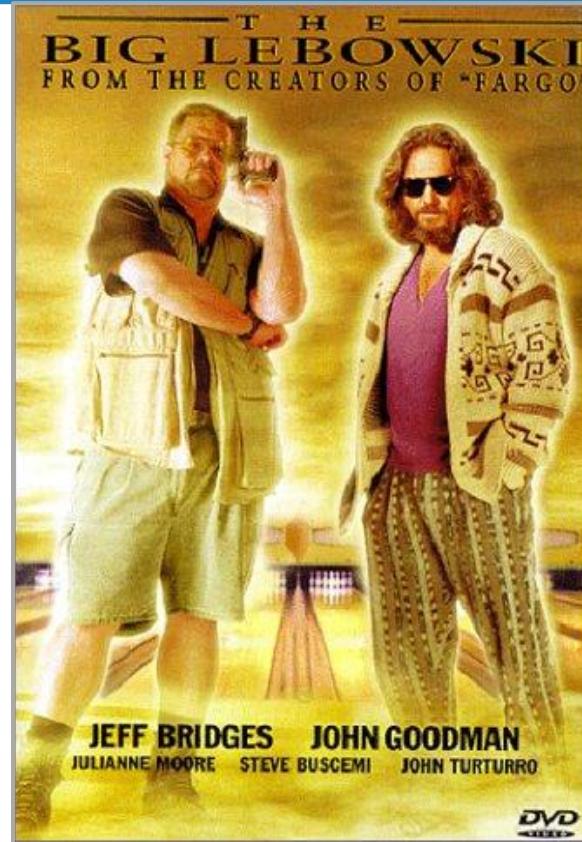
Leg 3: Media Center

1. Make your way to the Media Center, on the 5th floor. At the service desk, you will find a DVD case waiting.

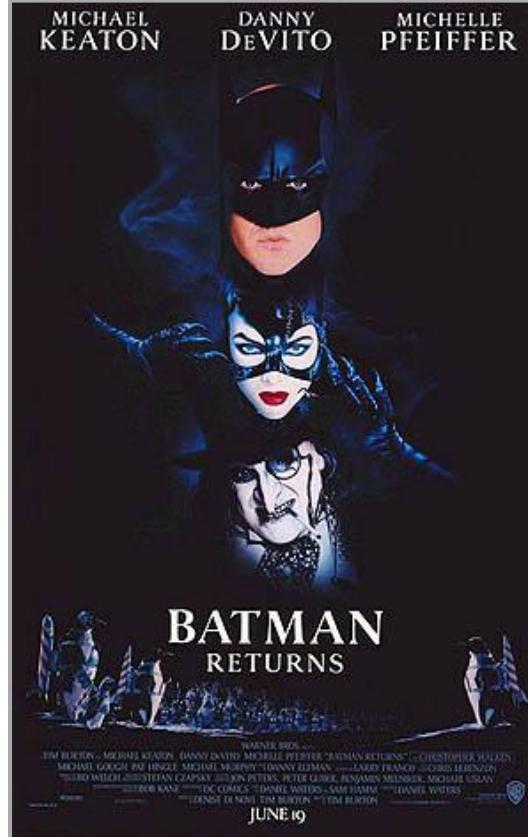
Using the available props, recreate this DVD cover, and take a photo.

Return to the instruction lab with the photo to proceed to the next leg of the race.

Leg 3: Media Center



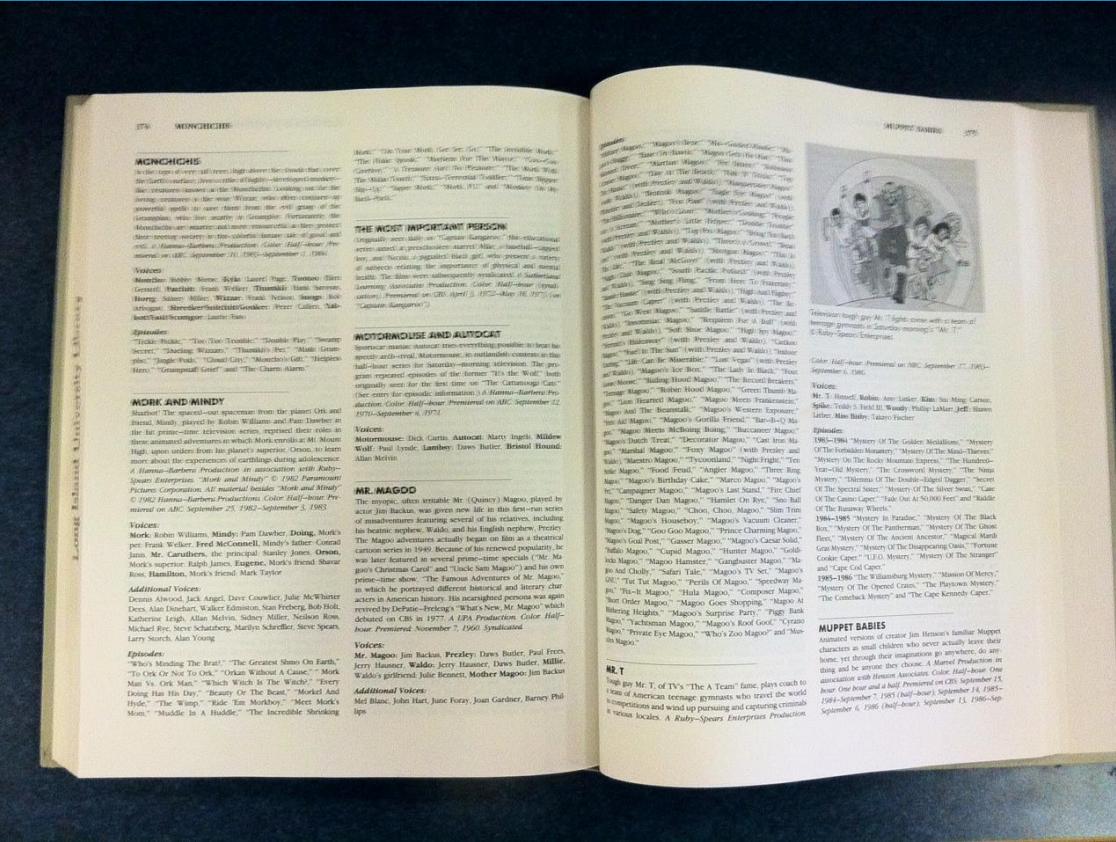
Leg 3: Media Center



Leg 4: Reference Desk

1. Write a haiku about how and where you could go in the library to print documents. Haiku structure: A poem with three lines; 5 syllables in the first line, 7 syllables in the second line, 5 syllables in the third line.
2. Make your way to the Reference Desk on the 3rd floor, and ask the librarian on duty for *The Encyclopedia of Animated Cartoons*. Look up “Mr. T” in the index. In the show of the same name, who does the voice of “Miss Bisby”?

Leg 4: Reference Desk



Assessing the Amazing Library Race

Research and Results

Student Learning Artifacts

7

THE AMAZING LIBRARY RACE

60

You will form teams of 3 people. Please select a name for your team. Each team will turn in one answer sheet for the group, and you will together to complete each leg of the race. There are four legs of the race, and they are to be worked on one at a time. The answers for each leg must be completely correct before you can go on to the next one. The team that finishes the race first will win a prize.

Names: Ilova Apelsinov
Kim Chand
Natalie Fayman

Team name: Team Trio

Leg #1: internet research

1. ML 420.329 A3 2010

2. An organization of eight Brooklyn-based college libraries. You are eligible to use the resources of the other member libraries and to borrow materials from those libraries (e.g. Brooklyn College, St. Francis, St. Joseph's, Pratt Institute).

3. Article title: "Our Gatsnooki"
Journal title: American Scholar
Author: Chris Morley

Front page of the ALR student answer sheet:

1. Student names
2. Team Name
3. Answers for leg #1 (Internet research)

Benefits of Information Literacy Rubrics

- Objective approach to grading
 - All students measured by same standards
 - Reduce individual variations among multiple graders
- Students receive direct feedback and can use rubrics to assess their progress (Oakleaf, 2009)
- Instructors collaboratively define student learning benchmarks
- Self-evaluation skills learned from rubric use can be applied to professional practice (Van Helvoort, 2011)

Norming Background

- Norming: “process of ensuring that raters understand the rubric in a similar manner” (Reddy, 2011)
- Important part of conducting group research
- Lack of agreement among raters compromises reliability and validity
- Benefits of norming (Holmes & Oakleaf, n.d.)
 - Increases inter-rater reliability
 - Stimulates productive instruction conversations
 - Increases assessment skills and boosts confidence

Norming Process

1. Researchers collaboratively developed initial rubric
2. Researchers independently used rubric to score sample artifacts
3. Results were discussed and minor adjustments were made to rubric
4. Researchers scored artifacts using modified rubric

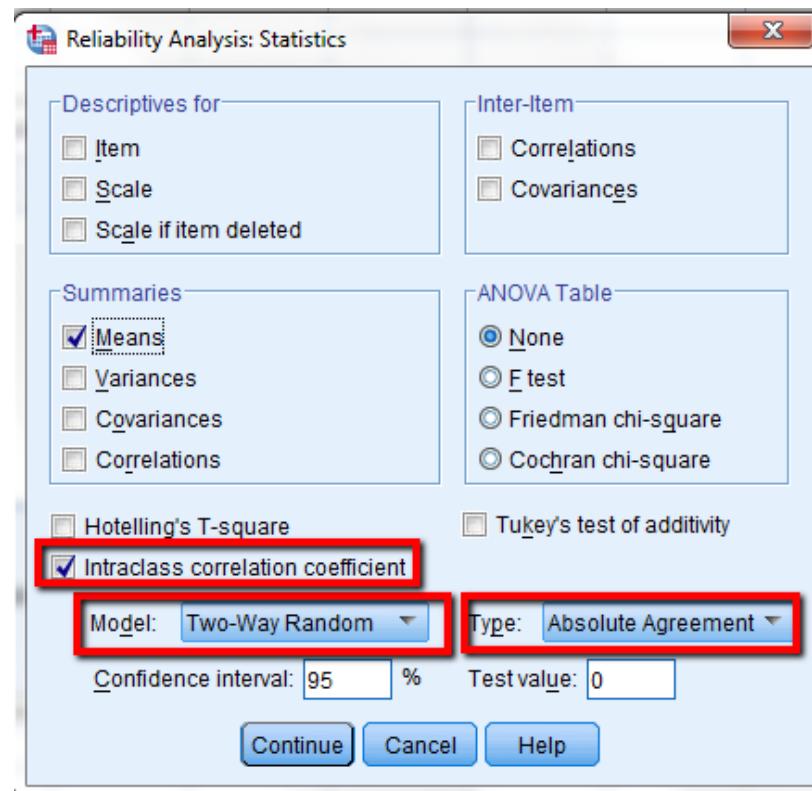
Inter-rater Reliability (IRR) Background

- IRR: reliability (consistency) of assessment scores among multiple raters (Moskal & Lydens, 2000)
 - Same raters should reach same scores
- Increases objectivity by reducing subjective biases
- Methods of calculating
 - Cohen's kappa (2 raters)
 - Intraclass correlation coefficient (ICC)
 - 3+ raters
 - 6 forms

Inter-rater Reliability (IRR) Process

1. 2 researchers calculated IRR in SPSS separately
2. Used ICC
 - a. Ordinal data (Wald et al., 2012)
 - b. $ICC(2,k)$ = Two-way random avg. measures with absolute agreement
3. Researchers compared scores
4. All 7 items scored high IRR ($>.85$)
 - a. ICC scores range from 0 to 1
 - i. $.6-.9$ = good (Laake, Benestad, & Olsen, 2007)

IRR in SPSS



Statistic used to calculate IRR in SPSS for multiple raters

Inter-rater Reliability (IRR) Results

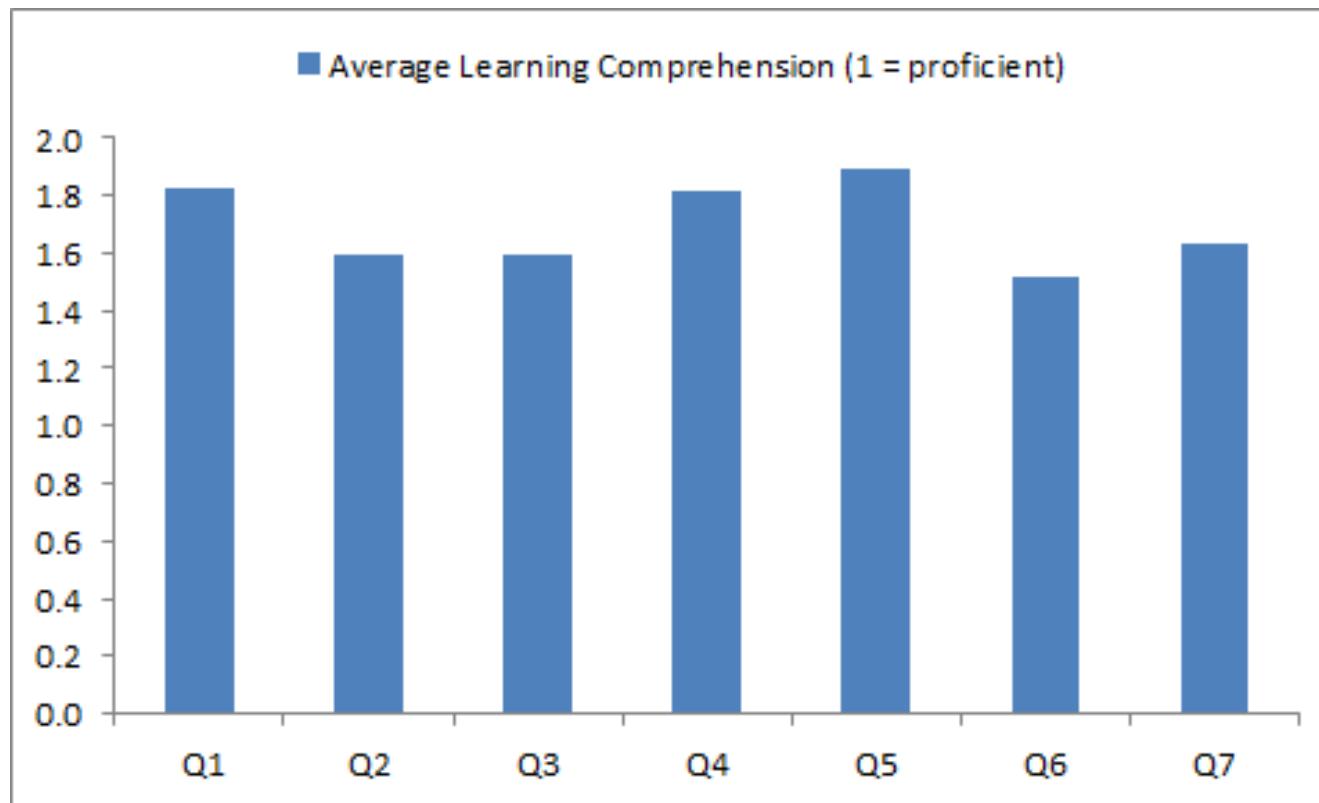
Item	Intraclass correlation coefficient (ICC)
Q1	0.969
Q2	0.937
Q3	0.975
Q4	0.856
Q5	0.877
Q6	0.91
Q7	0.949

Learning Comprehension Rubric

Task	Below proficient (0)	Proficient (1)	Above proficient (2)
1. Look in the library catalog for any books written by Jay-Z. Write down the call number of the book.	2+ errors in call number or left question blank.	One error in call number.	Correct call number
2. What is an LIU Academic Libraries of Brooklyn (ALB) card, and what can you do with it? Name four places you can use this card.	Both questions wrong or left question blank.	One of two questions correct.	Both questions correct.
3. This is an MLA citation for an academic journal article. Identify the article title, journal title, and author.	One component identified correctly or left question blank.	Two components identified correctly.	Three components identified correctly.
4. Complete this mysterious library Mad Lib about textbooks on reserve. Reserve books cannot leave the _____ (number) floor. You will need to have your _____ (noun) in order to check out a Reserve book. The Circulation desk staff are very _____ (adjective) people.	One space answered correctly or left question blank.	Two spaces answered correctly.	Three spaces answered correctly.

4 out of 7 total items assessed by the rubric shown here

Results: Learning Comprehension



Observation Rubric

Indicators	Beginning	Developing	Exemplary	Data source	Observations
Student to student engagement (count # students not engaged)	Less than 50% of students in the class collaborate on tasks	50-75% of students in class collaborate on tasks	75-100% of students in class collaborate on tasks	Observation during workshop	
Student to library faculty engagement (count # of students verbally engaged)	Less than 20% of students in the class have interactions with library faculty	20-50% of students in class have interactions with library faculty	50-100% of students in class have interactions with library faculty	Observation during workshop	
Student comprehension of workshop activities	Score of 0 to .5 on learning comprehension rubric	Score of .5 to 1.5 on learning comprehension rubric	Score of 1.5 to 2 on learning comprehension rubric	Student answer sheets	
Student engagement with library social networks	Less than 25% of groups send photos to post on library Facebook page	Twenty-five to 50% of student groups send photos to post on library Facebook page	Fifty to 100% of student groups send instructors photos to post on library Facebook page	Media Center photos emailed to librarians	# photos emailed:
Student engagement with library social networks	Library Facebook page connections show no increase	Library Facebook page connections increase by up to 50%	Library Facebook page connections increase by 50% or more	New connections made via social media	
Workshop duration	Less than 50% of class correctly completes all tasks on time	Fifty to 75% of class correctly completes all tasks on time	Seventy-five to 100% of class correctly completes all tasks on time	Observation during workshop	

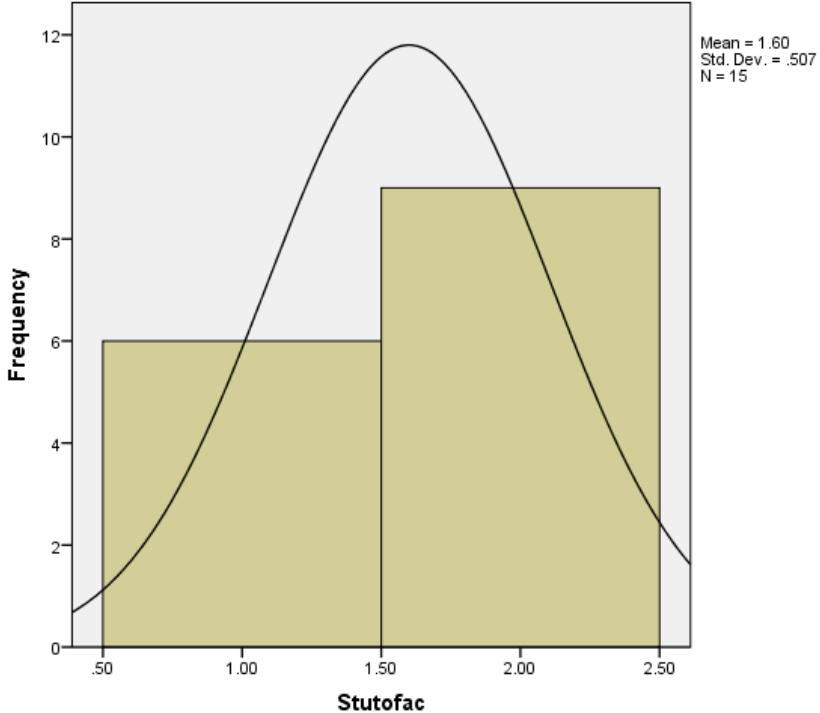
Results: Observations

Descriptive statistics for items assessed by the observation rubric

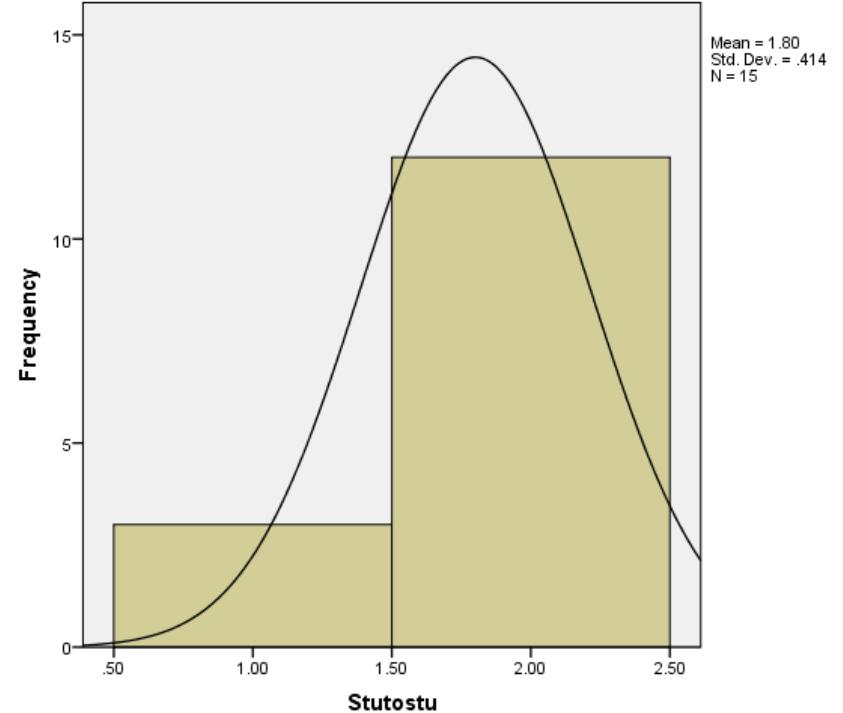
	# of groups in class	# of students	Student to student engagement	Student to faculty engagement	# of photos emailed	Workshop duration
Total	68	227	N/A	N/A	15	N/A
Mean	4.5	15.1	1.8	1.6	1	1.9
Median	5	16	2	2	1	2
Mode	5	16	2	2	0	2
Std. dev	1.1	3.2	.41	.51	.93	.26

Results: Student Interactions

Student to Faculty Frequency Distribution



Student to Student Frequency Distribution



Results: Summary

- High student-to-student engagement
- High student-to-faculty engagement
- Average learning comprehension well above proficient for all activities
- Increased Facebook page activity (one photo per session contributed)

Conclusions

Challenges and Future Plans

Conclusions

- Students enter the classroom skeptical, leave enthused
- Professors request ALR
- Teaching is front-loaded, but enjoyable during class
- Assessment tools used by researchers demonstrate high levels of IRR
- Findings indicate high levels of student-to-student and student-to-faculty engagement, as well as high learning comprehension of workshop activities
- ALR can be translated to other academic institutions
 - LIU has served as a model for creation of at least 1 other ALR

Challenges

- Some students and/or faculty might prefer traditional instruction
- Controlling noise level
- Solo teaching
 - Solution: Recruit instructor or TA to help with directions
- Assessing social media component

Future Plans

- Train co-workers to teach the ALR
- Strategize ways to increase excitement and competition levels among participants
 - Theme music?
 - Countdown clock?
- Publish a scholarly article
- Coordinator of Instruction wants all Orientation Seminar classes to participate in fall of 2015

References

Holmes., C., & Oakleaf, M. (n.d.). The official (and unofficial) rules for norming rubrics successfully. *Journal of Academic Librarianship* (under review). Retrieved from <http://meganoakleaf.info/normingrubrics.pdf>

Laake,P., Benestad, H.B., & Olsen, B.R. (2007). Research methodology in the medical and biological sciences. Oxford, UK: Academic Press.

Moskal, Barbara M., & Leydens, J.A. (2000). Scoring rubric development: validity and reliability. *Practical Assessment, Research & Evaluation*, 7(10). Retrieved from <http://PAREonline.net/getvn.asp?v=7&n=10>

Oakleaf, M. (2009). Using rubrics to assess information literacy: An examination of methodology and interrater reliability. *Journal of The American Society For Information Science & Technology*, 60(5), 969-983. doi: 10.1002/asi.21030

Reddy, M. Y. (2011). Design and development of rubrics to improve assessment outcomes. *Quality Assurance in Education*, 19(1), 84-104. doi:<http://dx.doi.org/10.1108/09684881111107771>

Van Helvoort, J. (2011). The IL rubric seen from a student's perspective. *Journal Of Information Literacy*, 5(2), 95-96. Retrieved from <http://ojs.libero.ac.uk/ojs/index.php/JIL/article/view/PRA-V4-I1-2010-2/1444>

Wald H.S., Borkan J.M., Taylor, J.S., Anthony, D., & Reis, S.P. (2012). Fostering and evaluating reflective capacity in medical education: developing the REFLECT rubric for assessing reflective writing. *Academic Medicine*, 87(1), 41-50. doi: 10.1097/ACM.0b013e31823b55fa

Thanks!

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