



**HOLCOMBE INSTITUTE FOR TEACHING & LEARNING EXCELLENCE
CLASSROOM RESEARCH AWARD EVALUATION**

Human Resources – Holcombe Institute • 225 East Las Olas Boulevard • Fort Lauderdale, Florida 33301 • 954-201-7339

Please complete this form for the research project that you conducted for the Classroom Research Award. This information will be reviewed in order to evaluate the effectiveness of your research. Your evaluation and supporting documentation will be posted on the HI Website. Use additional paper where necessary.

Note: Please submit this form and supporting documentation within 30 days of the completion of your project to Office of Professional Development & Training, B31 - R605, WHC. In addition, you will need to attach an electronic copy of the evaluation to an EMAIL and forward to ProfDevTrng@broward.edu.

MUST BE WORD PROCESSED

Name:	Harvey Liftin	Date:	Jan. 20, 2009
Signature:			
Title of Research Project:	Can Two-Shot Grading Improve Student Test Scores and Achievement?		
Project Completion Date:	Dec. 1, 2008		

1. State the problem to be researched.

Can a two-shot grading strategy significantly improve the content knowledge and test scores of biology students in BSC 1010 and BSC 1005 lecture classes?

Students in these lecture sections will be given the opportunity to take a retest of the first two unit exams. Given more time and feedback from the first exam, students should show improvement in biology content and test scores.

2. Summarize the research findings/results. If applicable, attach copies of evaluation forms and a summary of those forms.

The results of this two-shot testing strategy were definitely positive for the majority of students who chose to participate in the program.

BSC 1010 - 8am section: 28 out of 40 students (70%) took Retest 1. The average test score increased from 62.8 to 71.7, a gain of nearly 9 points. Student gains ranged from 2 to 44 points and 25 of the 28 students increased their test scores. On Exam 2, 55% of the class chose to take the retest. The average score increased from 66.8 to 75.5 a gain of 8.8 points. 20 of the 22 students improved their test scores and gains ranged from 0 to 30 points.

BSC 1010 – 12:30 PM section: 22 out of 33 students took Retest 1 (67%) and the average score increased from 58.6 to 78.1, an average gain score of 19.5 points. All but two of the 22 students showed gains on the ReTest; gains ranged from 2 points up to 52 points. On Exam 2, 16 out of 32 students took the ReTest 2 and the average score increased from 64.4 to 72.9 and average gain score of 8.5 points. All but three students out of 16 showed gains ranging from 1 point up to 25 points.

BSC 1005 – 11 AM section: 15 out of 40 students signed up to take ReTest 1. The average score increased from 64.8 to 79.9, a gain of 15.1 points. Fifteen of the students increased their test scores. Gain scores ranged from 5 points up to 30 points. On the second exam, Fifteen students took ReTest 2 and thirteen showed gains ranging from 2 up to 38 points.

The three classes that took part in this classroom research project all showed significant gains in their original test Scores but the gains were uneven as one would expect. Some students might raise their score by 40 points and other students by just one point based on preparation time, self-motivation and ability. The average gain in all classes amounted to a letter grade change in the student's final test score. Ultimately the gains made by many students, who took advantage of the test-retest strategy, resulted in these students earning final course grades that were one letter grade higher that they would have been without the two-shot testing. Another important observation I made concerned Exam 1. The average gain score on Exam 1 was 9, 15 and 19.5 points respectively – all very substantial improvements over their original scores. Students often tell me they don't know what to expect on the first exam of a semester and the chance to take a retest is very comforting for them. Scores on the exam 2's retest were 8.5, 9 and 9.5 respectively.

I wanted to see if this intervention strategy helped minority students (African American, Hispanic and Asian) improve their overall content knowledge and achievement. In the BSC 1010-8 AM class, 25 of the 40 students were minority and 8 achieved one higher letter grade at the end of the course. In the BSC 1010-12:30 PM class, 17 of the 33 students who took the retests were minority and 13 achieved an increase in one letter grade at the end of the course. In the BSC 1005 class, 10 of the 40 students who took the retests were minority and a total of 12 students overall achieved an increase of one letter grade for their final grade,

I am attaching copies of the original exams and retests that students were given along with the individual grades Students earned on both exams. For each class I determined the average and standard deviation for the original Exam, the retest and the gain score.

3. Describe the methods you used to evaluate the effectiveness of your project. Include quantitative and/or qualitative evidence.

- a) All students were given Unit 1 and II exams on a specific day. Student exam papers were returned during the next class meeting. Students were then allowed to sign up for the retest to be given approximately 10 days after the first exam was given. The 10 day period was chosen to allow students to review the first exam and refocus on areas they needed to improve on.
- b) ReTests were given either during regular class time or in the Learning Resources Center. I would proctor the exam and grade it. The ReTest exam was a different set of questions based on the same content as the original exam.
- c) Students received their results during the next class meeting. The majority of students showed gains and many students had positive comments on the entire experience. Several students expressed to me that on the day of the original exam they had two other exams in math or chemistry and getting a chance to take a ReTest really helped them master concepts they didn't fully understand.
- d) After the semester was over I collected all of the test data and using Excel determined the individual class averages and standard deviation. I am enclosing all the test data as qualitative evidence of the project's effectiveness.

5. If applicable, identify what prevented you from achieving your original, expected findings.

The findings were generally what I had expected. Class gain scores ranged from 8.5 to 19.5 points with the average gain score for each class approaching 9 or 10 points which equates to one letter grade improvement. What might prevent instructors from replicating this study would be available class time and classroom space to give a retest.

6. Explain in detail how you intend to share the results of this research with the Broward College community.

I plan to share data and methodology with members of the biology department of Central Campus. A summary of this project can be presented to faculty

7. Describe ways in which faculty from other disciplines could apply your research and its results in classroom practices, in future studies, and/or for student success?

Faculty from other disciplines could use the same methods in any of the sciences or social sciences. It might be a bit harder to replicate in an English class that involves writing themes or papers but I think it could be done in different ways. Some of my colleagues have already tried this approach in their biology and physical science classes.

Future studies:

If I were to do this again, I would add a student survey or do an individual interview with students to ascertain their feeling regarding the opportunity to take a comparable retest to demonstrate their mastery of content information. These testimonials would be powerful and perhaps influence other programs to adopt this strategy.

**Submit this evaluation via EMAIL to ProfDevTrng@broward.edu
AND**

Send the ORIGINAL (HARD COPY with signatures) to

**Holcombe Institute for Teaching & Learning Excellence: HR - Office of Professional
Development & Training - Bldg. 31/605 WHC - Phone 954-201-7339**