



Collaborative Testing

A look at teaching through testing

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Tests! A necessary component of every nursing course.



Individual testing: students take tests alone under watchful eye of teacher in a controlled environment. Lots of evaluation with little learning.





Individual testing is necessary for evaluation. But can it be part of the learning process?



Students could learn from individual testing if you dare to pass the test back

Test review in class can lead to arguing and a defensive teacher



Collaborative testing allows students to discuss the questions right away... with each other



Methods

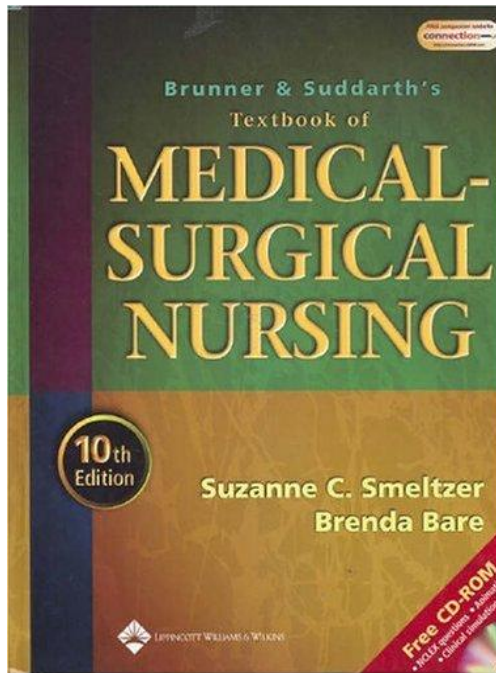
In our pathophysiology and med-surg nursing courses, students took tests by themselves. They then returned to the classroom and repeated same tests in groups.



Testing

- Student test scores were calculated as follows:
 - 90% individual test
 - 10% group test
 - Or, 100% individual test if it was higher than the combined two.

Books, notes, computers and discussion were allowed



We compared two groups

- Groups:
 - Group 1 tested before we implemented the collaborative / group testing practice.
 - Group 2 tested after we implemented the collaborative / group testing practice.
- Data were analyzed using SPSS
 - Frequencies
 - *t*-tests for independent group means

We set out to answer 2 questions related to our procedure of collaborative testing.....



1. Does collaborative testing improve content mastery as measured by exam scores?
2. Do students perceive that collaborative testing is an effective teaching tool as measure by an opinion survey?

Suppositions

- Students who participate in group testing will score higher on final exam scores compared to students who do not participate in group testing.
- Students who participated in group testing will report satisfaction with the process.
- Students who participate in group testing will describe the process as conducive to learning.

Results

We compared 2 groups of students

CLASSES WITH TRADITIONAL TESTING METHOD FALL 2006 TO SPRING 2008

	1	2	3	final
Fall 06	84.9	80.8	80.7	80.0
Spring 07	81.0	84.1	87.0	80.3
Fall 07	87.6	85.9	79.0	82.2
Spring 08	84.8	83.7	81.8	82.8

CLASSES THAT USED COLLABORATIVE TESTING FALL 2008 TO SPRING 2010

	1	2	3	final
Fall 08	82.2	86.6	84.0	80.2
Spring 09	83.3	81.5	82.0	83.6
Fall 09	85.2	83.1	84.9	82.1
Spring 10	78.4	84.2	83.0	82.5

Results

There was no significant difference between scores of students who participated in group testing compared to those who did not participate in group testing.

Students were very satisfied and reported favorably regarding the collaborative group testing process.

Students reported that the collaborative testing was conducive to student learning.

Interpretation....

Scores for first 3 tests were not higher for the collaborative group testers.

The 10% weight of the collaborative test did not inflate grades.

Final exam scores also did not go up for collaborative testers as expected. This might be attributable to new content on the final that students did not learn about through collaborative test.

However....



Students reported great satisfaction with collaborative testing process and perceived benefit to learning.

Benefits to collaborative testing

I like to hear other perspectives and ways of understanding material

Found out how I did on the test, which was great. Allow to gain different perspectives on questions. It was helpful to review the test right after taking it.

I loved how it gave me a chance to learn from my test immediately, while material is fresh in my mind, instead of a week later

I liked it because its not as stressful and I think it promotes critical thinking and discussion. Also when working as a nurse. There is a lot of opportunity for collaboration.



Disadvantages

Might get a group that doesn't work well together

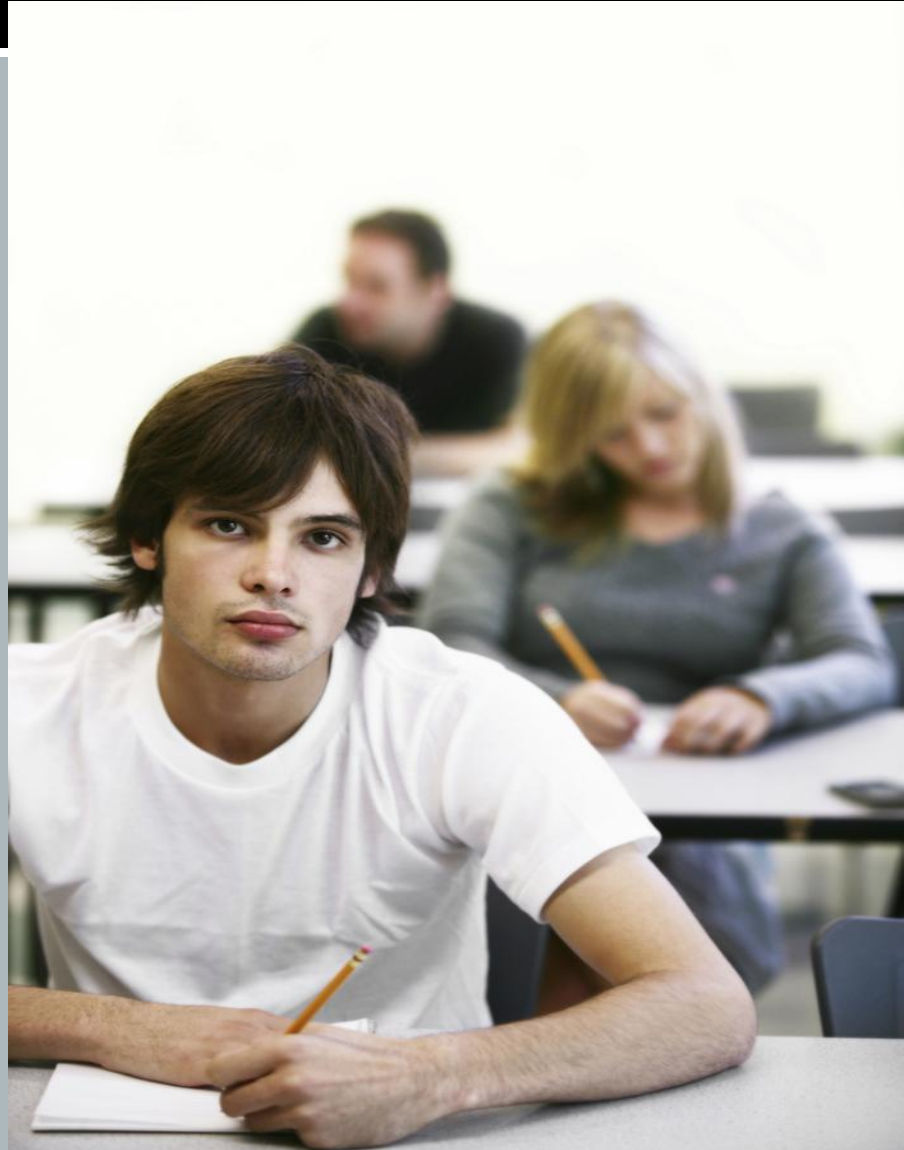
Argumentative groups

Sometimes the people in my group caused unnecessary arguments. Sometimes what I learned completely depended on who I was working with . Better if we could've chosen groups.

Needed more time to discuss.

Some students carried the weight of the group.

Some students didn't participate which was unfair because this helps all of our grades



Conclusions...

Even though test scores did not go up with collaborative testing, Students reported many more advantages than disadvantages.

Teachers reported a decrease in argumentative behavior since students had opportunity to discuss questions with classmates, thereby getting a peer perspective.

Students believed to be receiving a slight benefit to test scores by The inclusion of 10% weight of group test.

Group test scores were almost always higher than individual test scores indicating the benefit of working together.

Recommendations for further study

- Compare test scores for final exams that don't include new content
- Compare scores with traditional and group testing without use of books and notes
- Try other ways of testing such as group essay answers
- Allow students to select their own groups
- Provide more weight to group test

Overall, we think collaborative testing is the way to go....



...Because despite any disadvantages, the students *got satisfaction* from the leaning that occurred as a result of working together.