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### Introduction/ Key Words

cooperative learning,  
autonomous learning,  
accounting education,  
cost accounting

Using two sections of cost-accounting classes, analysis determined that in general , assessment outcomes (grades) did not differ when students submitted quizzes and case studies on either a group or individual basis.

Exceptions to the above were found when “new” learning materials were introduced or learning materials were presented in an integrated manner, such as the integration of learning outcomes from different modules within the course.

### Objective/Aim/ Benefit to Accounting

To determine if there is a significant difference in group & autonomous learning that can contribute to the development of the accounting professional.

### Results/Conclusion

“New” or integrated learning concepts provide challenges to students that were overcome by working within groups.

### The Author

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To determine if there is a  
significant difference in  
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learning that can contribute  
to the development of the  
accounting professional.

### Methods

Intra-sectional assessment results  
were tested to determine if both  
sections of classes were  
homogeneous in their makeup.

$$U_{\text{pre quiz}} - U_{\text{post quiz}} = 0$$

### Intra-Sectional Quiz Results

Section A: Based on t-tests null not  
rejected at all C.I.'s.

Comparison of pre/post quiz 1 & 3  
results, based on p-value, provides  
rejection of null.

Section X: Based on t-tests null not  
rejected at all C.I.'s.

Comparison of pre/post quiz 4,  
based on p-value, provides rejection  
of null.

### Conclusion

Both sections of students are  
homogeneous in make-up and are  
excellent subjects for cross-  
comparisons of group and individual  
assessment results.

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### Methods

Intersectional Quiz Performance

Hypothesis testing, using t-tests and p-value, was performed on pre-case quiz results of Sections A and X.

Confidence intervals of 90%, 95% & 99%.

$$U_{\text{pre quiz sect a}} - U_{\text{post quiz sect x}} = 0$$

### Results Pre-Case Quiz

With the exception of pre-case quiz 2, the null is not rejected – there are no differences between students pre-case quiz results based on comparison of group/individual submissions for modules 1, 3 and 4.

A comparison of pre-case quiz 2 results shows rejection of null at 90% and 95% C.I.. Non-rejection at 99% C.I.

Mirror image in results between pre and post case test results.

### Conclusion

Evidence is provided that the mode of submission (group vs. individual) did not have a statistically significant impact on assessment results with the exception of when students were required to work on “new” learning material, in this case activity based costing.

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### Methods

Intersectional Quiz Performance

Hypothesis testing, using t-tests and p-value, was performed on pre-case quiz results of Sections A and X.

Confidence intervals of 90%, 95% & 99%.

$$U_{\text{post quiz sect a}} - U_{\text{post quiz sect x}} = 0$$

### Results Post-Case Quiz

With the exception of post-case 2, the null is not rejected – there are no differences between students post-case results based on comparison of group/individual submissions for modules 1, 3 and 4.

A comparison of post-case 2 results shows rejection of null at 90% at all C.I..

Mirror image in results between pre and post case test results.

### Conclusion

Evidence is provided that the mode of submission (group vs. individual) did not have a statistically significant impact on assessment results with the exception of when students were required to work on “new” learning material, in this case activity based costing.

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### Methods

Intersectional Case Study  
Performance

Hypothesis testing, using t-tests and  
p-value, was performed on case  
study results using confidence  
intervals of 90%, 95% & 99%.

**U Section A Case Grade – U Section X  
Case Grade = 0**

### Results Case Study Perf.

Intersectional comparison of case  
submission results showed no  
statistical difference in academic  
results at all confidence levels,  
except for case 4.

Case 4 Testing Results:

C.I. 90% and 95% - null was not  
rejected.

C.I. 99% - null rejected.

### Conclusion

Cases 1-3 effectively siloed learning  
outcomes, allowing students to focus on a  
discrete set of learning outcomes which  
provide both sets of students to perform  
on a relatively equal basis, taking-into-  
account the mode of submission.

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### Methods

Intersectional Case Study  
Performance

Regression Analysis at confidence  
intervals 90%, 95% & 99%.

Dependent Variable:  
Final Course Grade

Independent Variables:  
Gender ( $m = 0$ )  
Section ( $a = 0$ )  
Fall GPA  
Case 1  
Case 2  
Case 3  
Case 4

### Results Regression of Case Studies

Assuming 10% C.I. significant  
variables are:

Gender ( $m = 0$ )  $-.0235$  (p-value  
.06446)

Fall GPA  $.04622$  (p-value .00549)

Case 2  $.48419$  (p-value .00716)

Case 3  $.20903$  (p-value .00157)

Assuming 95% & 99% CI significant  
variables are:

Fall GPA  $.04622$  (p-value .00549)

Case 2  $.48419$  (p-value .00716)

Case 3  $.20903$  (p-value .00157)

### Conclusion

Evidence that GPA, & cases 2 and  
3 are significant contributors to  
final grade performance at all  
C.I.'s.

Experience in prerequisite  
classes, learning outcomes  
embedded in case 2 (activity  
based costing) and case 3  
(process costing) were sig.  
contributors to grade  
performance.

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