



WORLDWIDE CAMPUS | COLLEGE OF ARTS & SCIENCES

Do We Really Need to Have All of That Work In the (online) Course?

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Workload issues with online courses



Overcompensating with busy work?



Don't overload students
(Stenger, 2018)



Increased online course work
is associated with reduced
academic achievement
(Motz, 2021)

Why remove coursework?

Extraneous workload

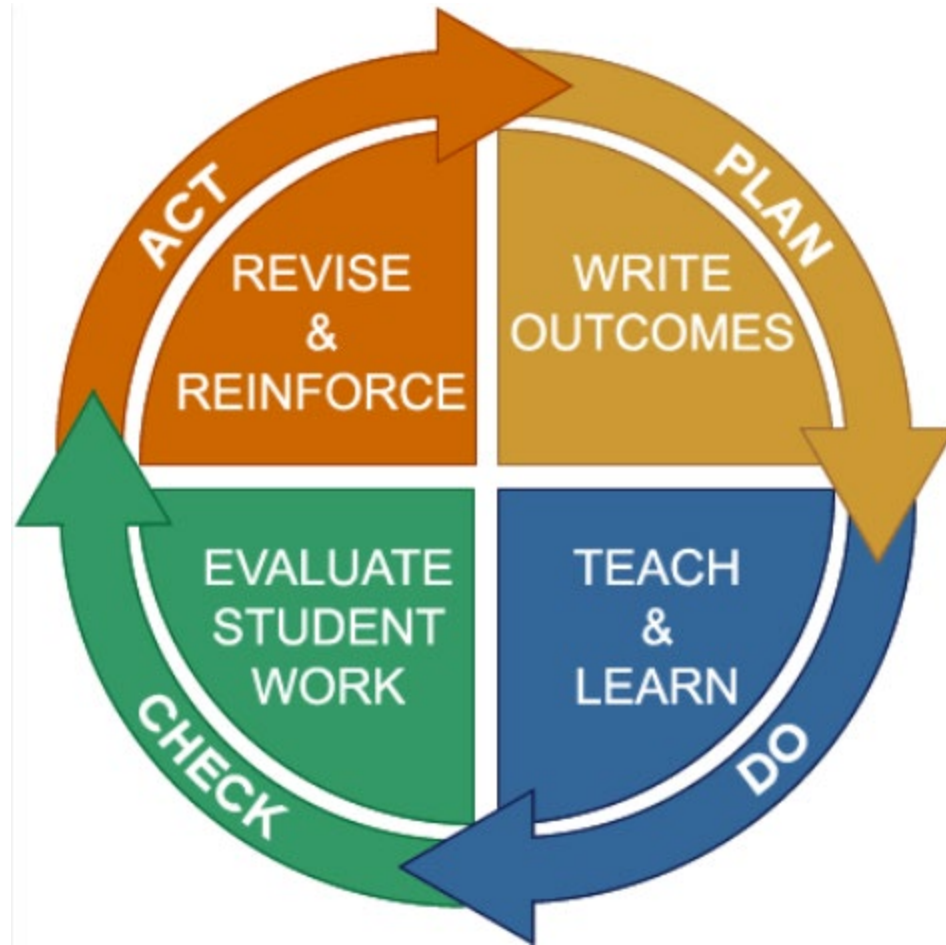
Friction

Has that objective already been covered?

Lower chance of students dropping or not finishing course



Modified Shewhart (Assessment) Cycle



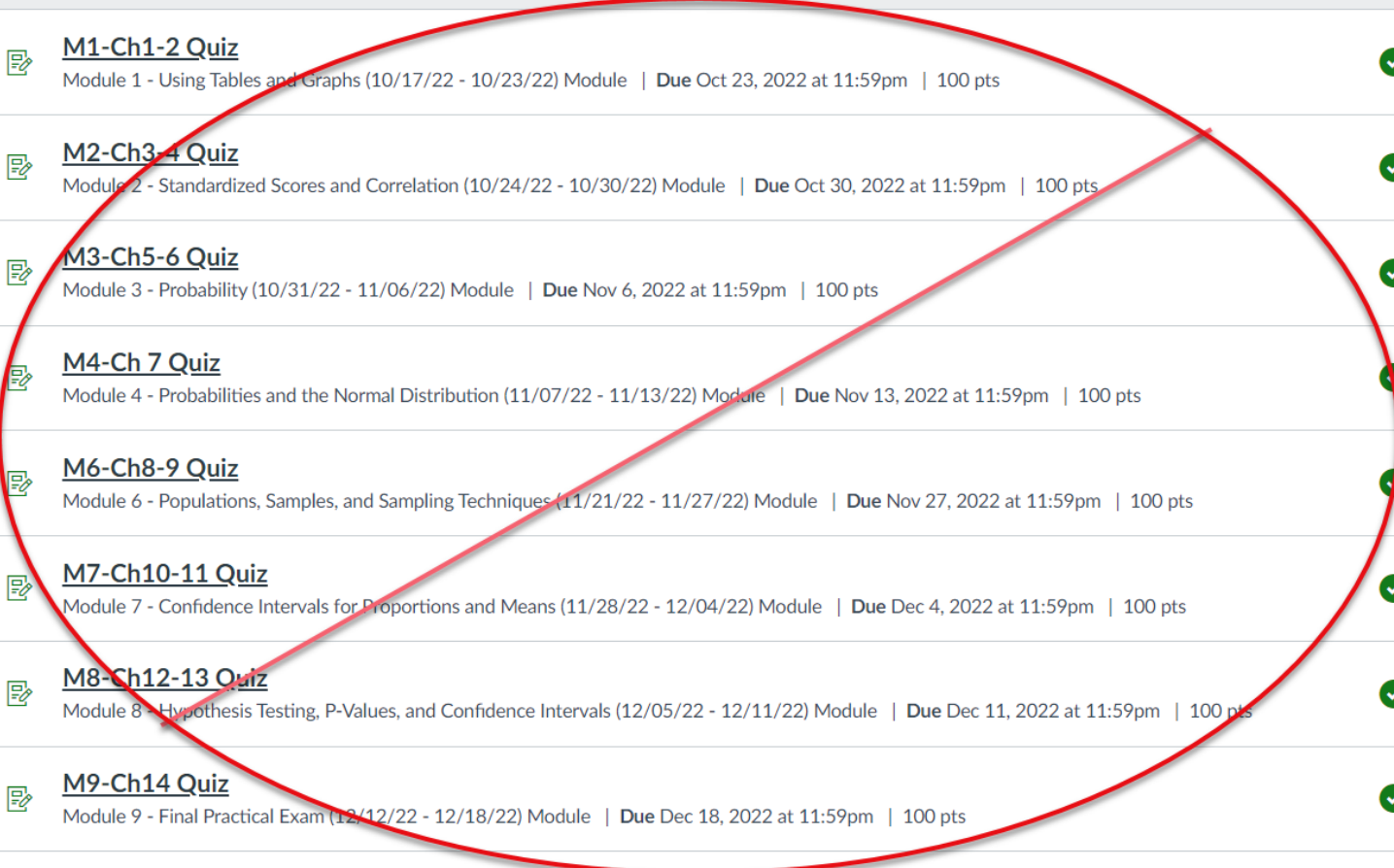
Before

















Module 4 - Probabilities and the Normal Distribution (11/07/22 - 11/13/22)	✓ + ⋮
Module 4 Overview and Objectives	✓ ⋮
Module 4 - Readings & Resources	✓ ⋮
M4-Ch 7 Hw Nov 13, 2022 100 pts	✓ ⋮
Module 4 - Keeping It Real Discussion: Why Should Companies Design Based on the Normal Distribution? Nov 13, 2022 100 pts	✓ ⋮
Module 4 - Keeping It Real Discussion: What's Up with Data Visualization? Nov 13, 2022 100 pts	✓ ⋮
M4-Ch 7 Quiz Nov 13, 2022 100 pts	✓ ⋮
Module 4 Wrap-Up	✓ ⋮

After

Module 4 - Probabilities and the Normal Distribution (11/07/22 - 11/13/22)	✓ + ⋮
Module 4 Overview and Objectives	✓ ⋮
Module 4 - Readings & Resources	✓ ⋮
M4-Ch 7 Hw Nov 13, 2022 100 pts	✓ ⋮
Module 4 - Keeping It Real Discussion: Why Should Companies Design Based on the Normal Distribution? Nov 13, 2022 100 pts	✓ ⋮
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M4-Ch 7 Quiz Nov 13, 2022 100 pts	✓ ⋮
Module 4 Wrap-Up	✓ ⋮

Removed all 8 quizzes

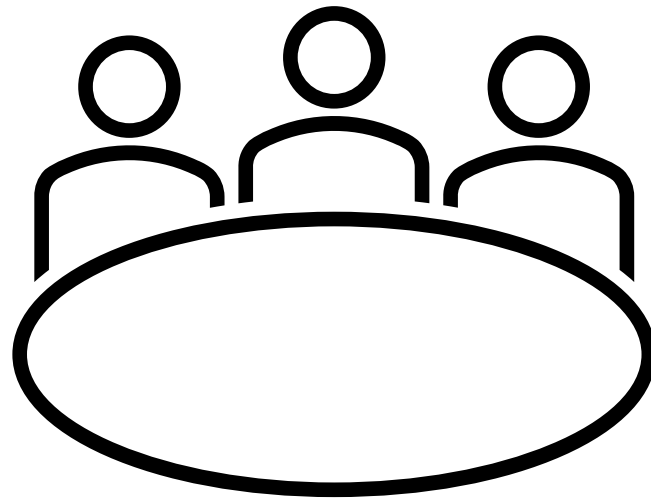


	<u>M1-Ch1-2 Quiz</u> Module 1 - Using Tables and Graphs (10/17/22 - 10/23/22) Module Due Oct 23, 2022 at 11:59pm 100 pts	
	<u>M2-Ch3-4 Quiz</u> Module 2 - Standardized Scores and Correlation (10/24/22 - 10/30/22) Module Due Oct 30, 2022 at 11:59pm 100 pts	
	<u>M3-Ch5-6 Quiz</u> Module 3 - Probability (10/31/22 - 11/06/22) Module Due Nov 6, 2022 at 11:59pm 100 pts	
	<u>M4-Ch 7 Quiz</u> Module 4 - Probabilities and the Normal Distribution (11/07/22 - 11/13/22) Module Due Nov 13, 2022 at 11:59pm 100 pts	
	<u>M6-Ch8-9 Quiz</u> Module 6 - Populations, Samples, and Sampling Techniques (11/21/22 - 11/27/22) Module Due Nov 27, 2022 at 11:59pm 100 pts	
	<u>M7-Ch10-11 Quiz</u> Module 7 - Confidence Intervals for Proportions and Means (11/28/22 - 12/04/22) Module Due Dec 4, 2022 at 11:59pm 100 pts	
	<u>M8-Ch12-13 Quiz</u> Module 8 - Hypothesis Testing, P-Values, and Confidence Intervals (12/05/22 - 12/11/22) Module Due Dec 11, 2022 at 11:59pm 100 pts	
	<u>M9-Ch14 Quiz</u> Module 9 - Final Practical Exam (12/12/22 - 12/18/22) Module Due Dec 18, 2022 at 11:59pm 100 pts	

Let's brainstorm!

(~5 minutes)

- How can you identify extraneous activities in your course



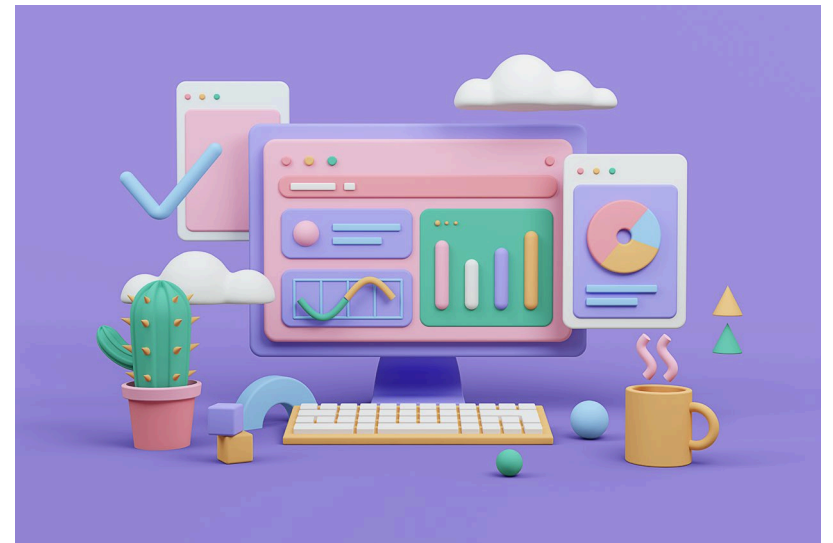
Do we need all those quizzes?

Course

- 200 Level STATs Course
- N = 1,242
- 5 terms without quizzes
- 5 terms with quizzes
- **Independent Variable:**
 - 8 Quizzes
- **Dependent Variables:**
 - Grade Distribution
 - Withdrawals
 - Pass/Fail

Methodology

- Chi Square Contingency Tables
- $\alpha=.016$





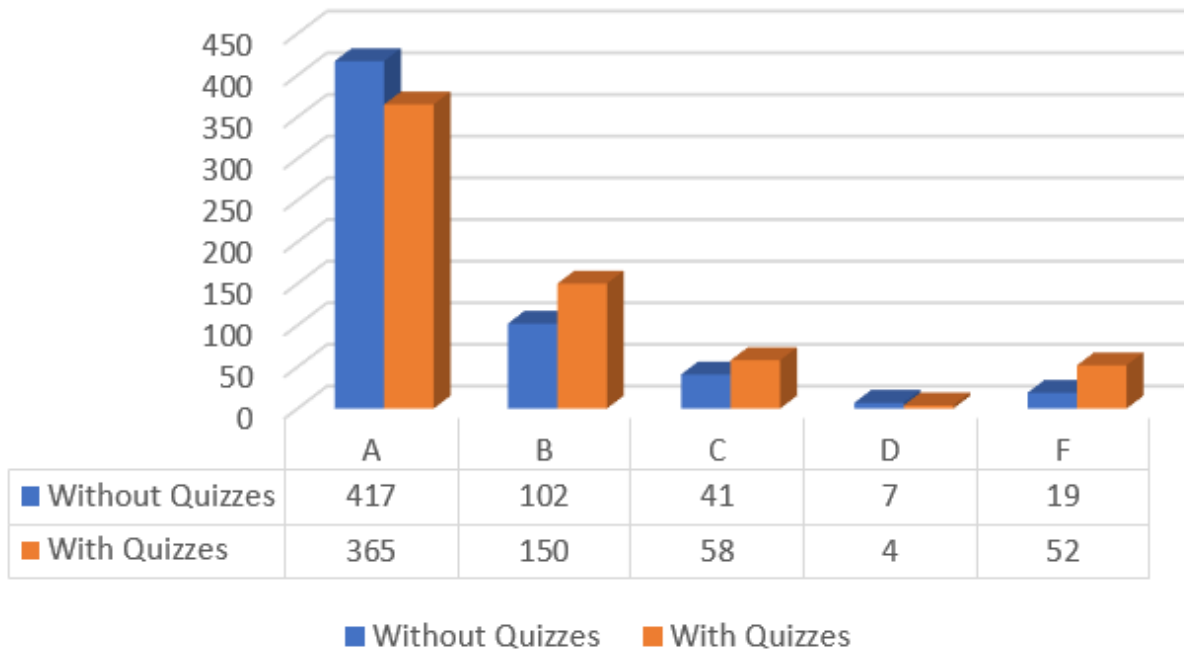
Non-traditional

- **Students**
- Working adults
- \approx 34 years old
- \approx 50% Military enlisted
- \approx 30% military affiliated
 - Spouses
 - GI Bill

Grades with and without quizzes



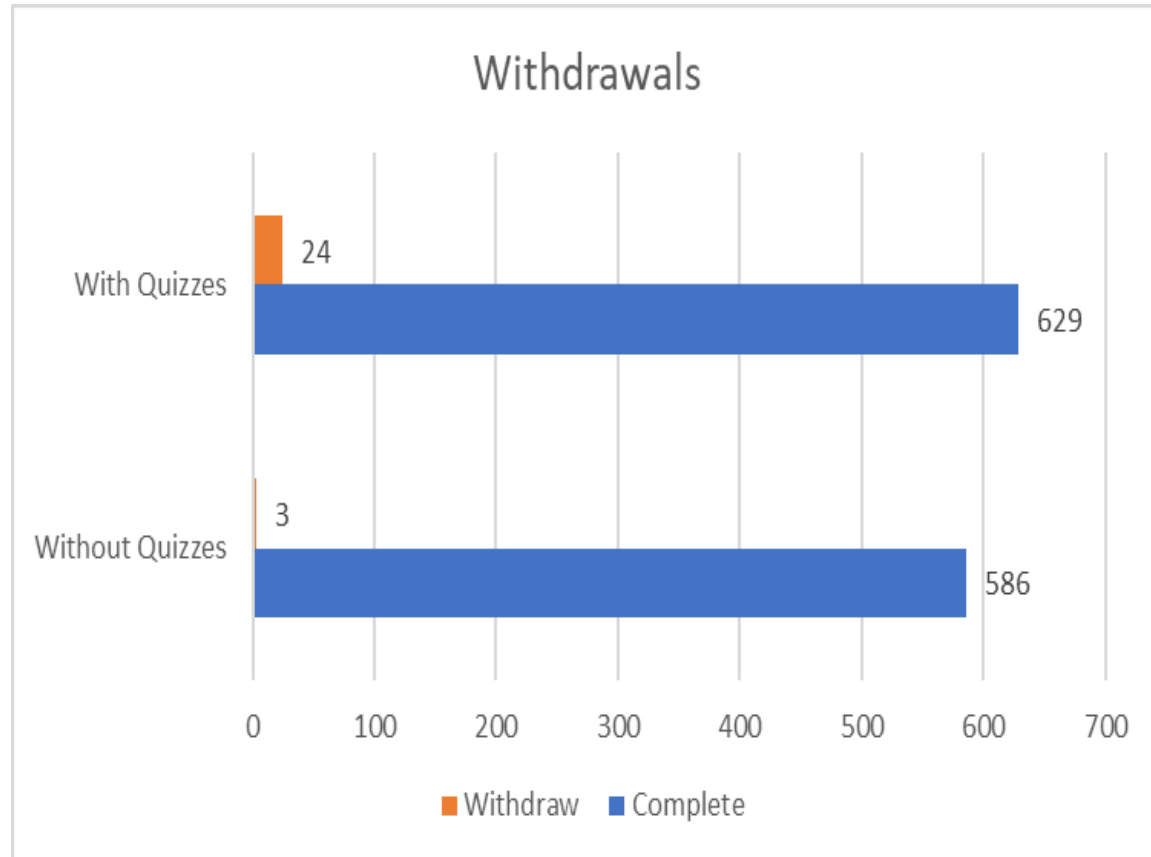
Grade Distribution



Analysis

- $N = 1,215$
- $(\chi^2(4, N= 1,215) = 30.19, p < 0.001)$
- More “As”, fewer “Bs” and Fewer “Fs” without quizzes

Withdrawals



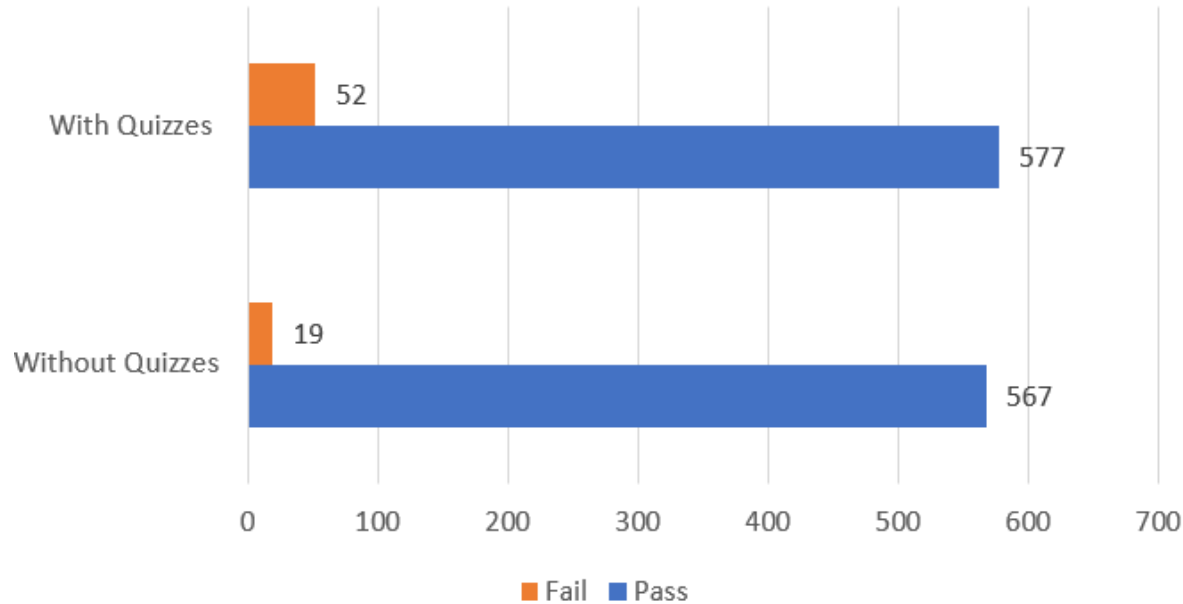
Analysis

- With Quizzes – July-Nov 2022
 - 24 of 653 (3.7%)
- Without Quizzes – Jul-Nov 2023
 - 3 of 589 (0.5%)
- ($\chi^2(1, N= 1,242) = 14.6, p < 0.001$)
- Lower withdrawal rates without quizzes

Failures



Pass vs Fail

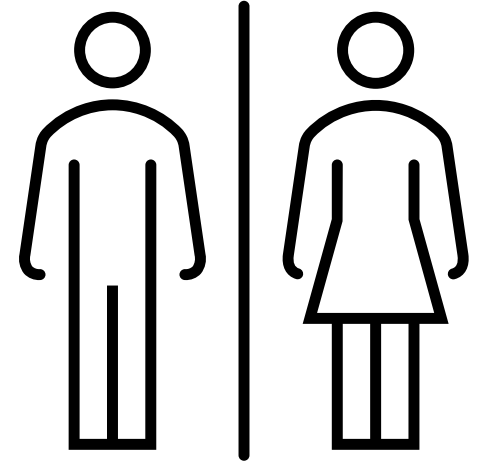


Analysis

- With Quizzes – July-Nov 2022
 - 52 of 629 (8.3%)
- Without Quizzes – Jul-Nov 2023
 - 19 of 586 (3.2%)
- ($\chi^2(1, N= 1,215) = 13.92, p < 0.001$)
- Lower failure rates without quizzes

Limitations

- 9-week terms
- Older students (avg age 34)
- 76% male
- 80% military affiliated
- Homework used multiple attempts – scaffolding pre midterm assignment



More Brainstorming!

(~5 minutes)

- What learning activities can you remove without harming student performance?
- Are we evaluating the same learning outcome multiple times?



Discussion, written assignment or quiz?



How would this impact my course design?



Ideas I have gotten from this presentation are?

Takeaways



Conclusions

- Grade distributions were significantly different
- Significantly Lower Withdrawals
- Significantly Lower Failures
- Don't need all those quizzes!
- Lighten student load/friction

Recommendations

- Ensure all activities are value added
- Don't be afraid to cut assignments if more than one covers the objective
- Replicate methodology used

References

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QUESTIONS?



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