

# **Assessing the Impact of Video Assignments on Finance Learning:**

**From Passive to Active Learning**

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# Introduction

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- Course: FIN 3030 (Business Finance)
  - Upper Division BSBA Core
- Topic: Time Value of Money (TVM)
  - Foundation for advanced courses
  - Students struggle with TVM
- Assessment Design
  - Student created video (screen recording)
  - Encouraging active learning

# Learning Objectives

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- BSBA LOs
  - 1.4 Demonstrate knowledge and understanding at a basic level of concepts and tools in finance
  - 3.1 (Communication Skills) Skill in presenting information in a well-organized manner both orally and in writing.
  - 3.2 (Technology Agility) Skill in identifying and incorporating appropriate technologies to solve practical business problems.

# Methodology

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- Two FIN 3030 sections in Spring 2025
- Instruction and assessment sequence



- Student video example

# Evaluation Criteria

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- Exam
  - One hour of problem-solving questions
  - 100 points
- Video
  - Rubric adapted from the AAC&U Quantitative Literacy VALUE Rubric, focus on
    - Interpretation
    - Representation
    - Calculation
    - Communication

| Criteria                                                                                                              | Ratings                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                                                                                      |                                                                                                                                                  | Pts   |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <p>Interpretation</p> <p>Ability to explain TVM concepts and calculations accurately.</p>                             | <p><b>1 pts</b><br/><b>Capstone Proficiency</b></p> <p>Clearly explains TVM concepts and calculations with accurate use of formulas and financial calculator inputs.</p>                                                                                                                                                                                           | <p><b>0.8 pts</b><br/><b>Proficient</b></p> <p>Explanation is mostly clear with minor errors or missing details in formulas or calculator inputs.</p>                                  | <p><b>0.5 pts</b><br/><b>Approaching Proficiency</b></p> <p>Shows some understanding but contains noticeable errors or lacks clarity in explaining key concepts.</p> | <p><b>0.2 pts</b><br/><b>Not Proficient</b></p> <p>Explanation is unclear, incorrect, or lacks proper use of formulas and calculator inputs.</p> | 1 pts |
| <p>Representation</p> <p>Ability to translate problems into appropriate TVM concepts (e.g., timelines, formulas).</p> | <p><b>1 pts</b><br/><b>Capstone Proficiency</b></p> <p>Uses appropriate mathematical forms such as timelines or formulas accurately to represent TVM problems.</p>                                                                                                                                                                                                 | <p><b>0.8 pts</b><br/><b>Proficient</b></p> <p>Uses correct representations but with minor inaccuracies or omissions.</p>                                                              | <p><b>0.5 pts</b><br/><b>Approaching Proficiency</b></p> <p>Attempts to represent problems mathematically but contains significant errors or missing components.</p> | <p><b>0.2 pts</b><br/><b>Not Proficient</b></p> <p>Fails to use appropriate representations or presents incorrect/incomplete visuals.</p>        | 1 pts |
| <p>Calculation</p> <p>Accuracy in using the financial calculator to solve TVM problems.</p>                           | <p><b>2 pts</b><br/><b>Capstone Proficiency</b></p> <p>Correctly applies TVM formulas and financial calculator inputs, leading to an accurate final answer. Shows a strong understanding of key steps, including careful attention to signs (positive/negative cash flows), correct use of N (number of periods), and selecting the appropriate interest rate.</p> | <p><b>1.6 pts</b><br/><b>Proficient</b></p> <p>Mostly correct calculations but may contain minor input errors. Lacks emphasis of caution with signs (positive/negative cash flows)</p> | <p><b>1 pts</b><br/><b>Approaching Proficiency</b></p> <p>Demonstrates an attempt to use the calculator but includes significant errors.</p>                         | <p><b>0.4 pts</b><br/><b>Not Proficient</b></p> <p>Incorrect calculations, incorrect use of financial calculator, or no attempt to solve.</p>    | 2 pts |
| <p>Communication</p> <p>Clarity, organization, and effectiveness of the presentation.</p>                             | <p><b>2 pts</b><br/><b>Capstone Proficiency</b></p> <p>Well-structured, engaging presentation with clear speech, logical flow, and effective visual aids.</p>                                                                                                                                                                                                      | <p><b>1.6 pts</b><br/><b>Proficient</b></p> <p>Presentation is mostly clear and organized but may lack engagement or minor structural elements.</p>                                    | <p><b>1 pts</b><br/><b>Approaching Proficiency</b></p> <p>Somewhat disorganized, with unclear explanations or ineffective use of visuals</p>                         | <p><b>0.4 pts</b><br/><b>Not Proficient</b></p> <p>Poorly structured, unclear speech, and lacks organization or visual support.</p>              | 2 pts |

Total Points: 6

# Results: Overall Performance

## Exam average score by class section

| Class                | Exam 1 | Exam 2 | Change |
|----------------------|--------|--------|--------|
| Class 1 (FIN3030-10) | 64.6   | 69.0   | +4.4   |
| Class 2 (FIN3030-11) | 64.4   | 70.7   | +6.3   |
| Both classes         | 64.5   | 69.8   | +5.3   |

# Results: Key Insight

- Video group: +8.2 (significant)
- Non-video group: +2.6 (not significant)

## Exam average score by video assignment completion

| Video Assignment Completion | Exam 1 Avg. | Exam 2 Avg. | Change (p-value) |
|-----------------------------|-------------|-------------|------------------|
| No (n=7)                    | 64          | 66.6        | +2.6 (p=0.559)   |
| Yes (n= 54)                 | 65.4        | 73.6        | +8.2 (p=0.0013)  |
| Total (n=61)                | 65.2        | 72.8        | +7.6 (p=0.0010)  |

# Conclusions

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- Video assignments are effective
- Improve application & communication
- Support learning goals
- Future Actions
  - Replace some traditional assignments
  - Expand to other topics/courses
  - Student video example FIN 3250