

# Can Non-Gender Based Curriculum Lead to Grades Without Gender Differences?

**INNOVATIVE  
EDUCATION**

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# INTRODUCTION

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## Can Non-Gender Based Curriculum Lead to Grades Without Gender Differences?

Background  
Phenomenon  
Assumptions / Limitations  
Literature Review  
Null and Alternative Hypotheses  
Methodology  
Findings  
Conclusions  
Education Industry Significance  
Future Research

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Introduction

# INTRODUCTION

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# INTRODUCTION

## Abstract

*The manner and curriculum of a course are important in engaging and developing students. While higher education works towards diversity and inclusivity, few studies examine how curriculum structure may impact learning on college students. This research used a large Midwestern teaching university with a predominately American student population that is demographically close to the U. S. population. The sample size was 4,426 (1,801 males and 2,685 females) students over five semesters. This research focused on the impact of the removal of gender-related content from a personal finance curriculum on learning. Comparisons of males' and females' grades were made using data prior to the curriculum change and post change. Data collection included each student's exam scores by course topic and course grades analyzed by gender. The study failed to detect a difference in the grades of males and females. The research finds that removing gender from a personal finance curriculum will not only lead to grades without gender difference but will increase overall grades.*

**Keywords:** curriculum, gender, higher education, North America,



# INTRODUCTION - BACKGROUND

## CHAPTER 1

### Importance of the Syllabus:

Syllabus is an important classroom document:

- Basis for class management and course design
- Many students work out their own personal expectations for themselves and create an outline of all their classes once they receive their syllabus.
- A syllabus includes all the information about a class including due dates and grade criteria.
- A syllabus can have an effect on the outcome of student grades.
- Students do not want to struggle to find information.



# INTRODUCTION - BACKGROUND

## CHAPTER 1

### Gender Differences are Important to Recognize:

Syllabus is an important classroom document:

- Preexisting bias (prior to classroom).
- Different rewards based on work ethic.
- Campus culture.
- Department culture (finance is a male dominated field).
- **PERSONAL FINANCE IS DIFFERENT.**



# INTRODUCTION – RESEARCH QUESTION

## CHAPTER 1

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### Research Question:

Can non-gender based curriculum lead to grades without gender differences?

### Assumptions:

- Students want to learn.
- It is not essential to include gender in a finance curriculum.
- Students deserve to feel included / Don't deserve to be excluded.
- Class should be taught to enhance and accommodate student learning.



# LIMITATIONS

## CHAPTER 1

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1. Quantitative study (no qualitative data available).
  - Terminal illness
  - No explanations
2. Missing many students from “college preparatory schools” or who were enrolled in “duel credit.”
3. Several “adult students” were enrolled.



# LITERATURE REVIEW

## CHAPTER 2

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### Course Resources:

Universities don't devote much energy to personal finance classes.

1. Low status assignment.
2. Lowest paid in department (anybody can teach).
3. Last minute teacher assignment.
4. Lack of expected outcomes.
5. Students don't understand the need.
6. Recruiting tool (for the parents).



# LITERATURE REVIEW

## CHAPTER 2

### Course Review:

It is important to review the course materials already in place.

1. Class should be as “real world” as possible.
2. Eliminate topics students already understood.
3. Devote more time to “college funding.”
4. Educate on topics students were likely to face in the short term.
5. Teacher wanted students to like class and do well on a national assessment.
6. Book was deemed unnecessary and detrimental to learning.
7. **GENDER ISSUES ONLY CAME UP AS AN ACCIDENT.**



# LITERATURE REVIEW

## CHAPTER 2

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### Course Design:

The course was modified to eliminate gender:

- Eliminate textbook. Select “stock book” costing \$7.
- All PowerPoint and class materials needed to be created from scratch.
- Attempt to remove overt gender bias (stereotypes on occupations).
- Class mascot was selected “Chirpy” the Cardinal – ethics content.



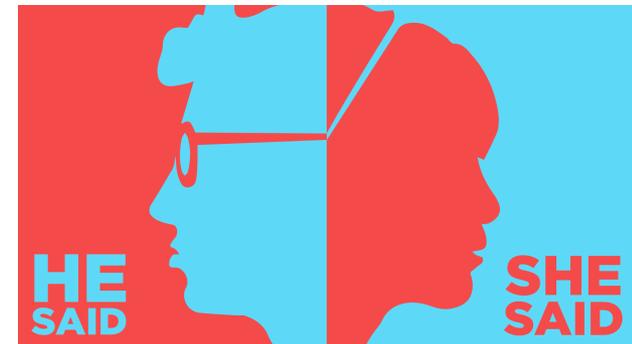
# METHODOLOGY

## CHAPTER 3

### Course Design:

Removal of Gender Bias or Stereotypes for all class materials (both Obvious and Indirect)

- Removal of the use of “he” and “she”
- Examples did not use “human names” but were all referred to as “professional titles”
- PowerPoints without gender references
- No photos of people in skilled positions
- Removal of traditional roles of families



# METHODOLOGY

## CHAPTER 3

### Sample Size:

Semester	Stage	Total Students	Female Students	Female Students %	Male Students	Male Students %
Spring 2014	Pre	907	599	66.04	308	33.96
Fall 2014	Pre	962	579	60.19	383	39.81
Subtotal		1,869	1,178	63.03	691	36.97
Spring 2015	Post	890	449	50.45	441	49.55
Fall 2015	Post	867	521	60.05	346	39.95
Spring 2016	Post	800	477	59.63	323	40.37
Subtotal		2,557	1,447	56.59	1,110	43.41
Total		4,426	2,685	59.31	1,801	40.69





# FINDINGS – GRADE CHANGES

## CHAPTER 4

### Pre-Changes (1):

Table 2. Average GPA, Standard Deviation, and Standard Error by Gender and Total Prior to Curriculum Change

	Total Students	Average GPA	Standard Deviation	Standard Error
Males	691	3.01	0.792	0.132
Females	1,178	2.84	1.052	0.151
Total	1,869	2.93	0.955	0.142

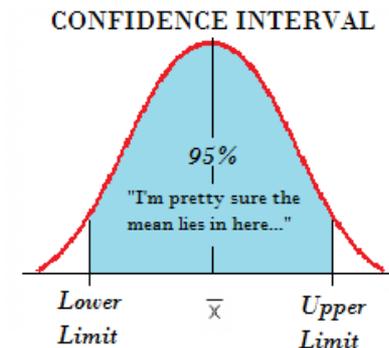
# FINDINGS – GRADE CHANGES

## CHAPTER 4

### Pre-Changes (2):

Table 3.  $t$  Score and 95% Confidence Interval by Gender and Total Prior to Curriculum Change

	Total Students	$t$ Score	95% Confidence Interval	
			Lower Limit	Upper Limit
Males	691	24.917	2.77	3.31
Females	1,178	25.273	2.59	3.32
Total	1,869	25.184	2.66	3.32



# FINDINGS – GRADE CHANGES

## CHAPTER 4

### Post Changes (1):

Table 4. Average GPA, Standard Deviation and Standard Error by Gender and Total Post Curriculum Change

	Total Students	Average GPA	Standard Deviation	Standard Error
Males	1,110	3.08	0.759	0.125
Females	1,447	3.07	0.920	0.124
Total	2,557	3.07	0.865	0.124

# FINDINGS – GRADE CHANGES

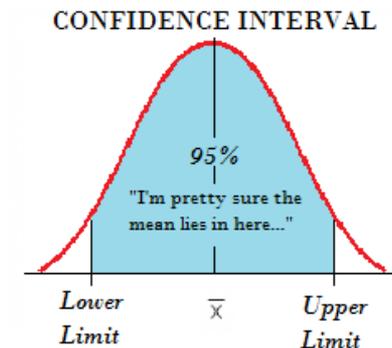
## CHAPTER 4

### Post Changes (2):

Table 5.  $t$  Score and 95% Confidence Interval by Gender and Total Post Curriculum Change

	Total Students	$t$ Score	95% Confidence Interval	
			Lower Limit	Upper Limit
Males	1,110	24.682	2.83	3.33
Females	1,447	24.769	2.82	3.32
Total	2,557	24.716	2.83	3.32

Table 5 shows the gender breakdown of students by  $t$  Score and 95% Confidence



# FINDINGS – GRADE CHANGES

## CHAPTER 4

### Post Changes (3):

Table 6. The difference in Average GPA by Gender Prior and Post Curriculum Change

	Average GPA Prior	Average GPA Post	Difference
Males	3.01	3.08	0.07
Females	2.84	3.07	0.23
Total	2.93	3.07	0.14

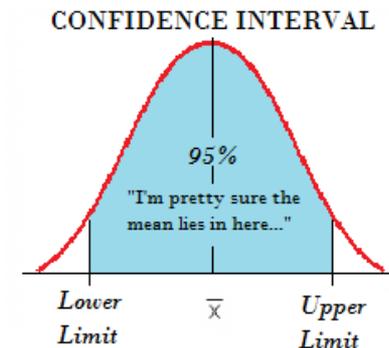
# FINDINGS – GRADE CHANGES

## CHAPTER 4

### 95% Confidence Intervals Changes:

Table 10. *The difference in 95% Confidence Intervals by Gender Prior and Post Curriculum Change*

	Lower Limit Prior	Upper Limit Prior	Lower Limit Post	Upper Limit Post	Lower Limit Difference	Upper Limit Difference
Males	2.77	3.31	2.83	3.33	0.06	0.02
Females	2.59	3.32	2.82	3.32	0.23	0.00
Total	2.66	3.32	2.83	3.32	0.17	0.00



# CONCLUSIONS - OVERALL

## CHAPTER 5

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### Overall,

The general conclusion for this research is educators should organize create courses free of gender bias.

- Male and female GPAs were essentially equal
- In this study researchers “accepted” the null hypothesis
- Female GPAs were higher
- Male GPAs were higher

# STUDY SIGNIFICANCE

## CHAPTER 5

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### Education Industry Significance:

- The course design is an extremely important document for the classroom.
- Within course design there should be an overt effort to eliminate gender when it is not needed.
- Using outdated curriculum will only provide the same results as the past.



# STUDY SIGNIFICANCE

## CHAPTER 5

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### Did you notice?

- Other than data, this presentation only included one gender reference (a pic of the actual student who suggested)?
- Did it hurt the presentation?
- Would a gender reference made the presentation better?



# FUTURE RESEARCH

## CHAPTER 5

### Possible Topics Include:

- Doing grade comparisons by academic year and gender.
- Reviewing if there are other items in a course design that could prove to be a distraction such as race, age, socioeconomic differences.
- Looking into other schools to see if they have different results.
- Looking into other general education courses to see if they have different results.
- Looking at gender based schools to see if they have the same results.



# ACKNOWLEDGMENTS

## SAMPLE REFERENCES

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References

# QUESTIONS

THANK YOU

