



**USING CHOICE AS A WRITING  
INTERVENTION TO INVESTIGATE  
GENDER DIFFERENCES**

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# Presentation Overview

- ◆ **Why We Looked into Writing Gender Differences**
- ◆ **3 Previous Studies on the Topic**
- ◆ **Current Study and Results**
- ◆ **Implications**

# Why Writing

- ◆ **Currently there are 10-15% of all elementary aged students in the United States struggling to succeed in the areas of mathematics, reading, and writing (Eckert, Lovett, Rosenthal, Jiao, Ricci, & Truckenmiller, 2006).**
- ◆ **Writing has been specifically identified as a neglected skill (National Commission on Writing, 2013).**

# Why Gender Differences

- ◆ **Females are currently outperforming males in the area of writing** (Berninger & Fuller, 1992)
- ◆ **Differences in spelling, handwriting, accuracy, and rate of reading may lead to gender difference in writing** (Berninger, Nielsen, Abbott, Wijsman, & Raskind, 2006)

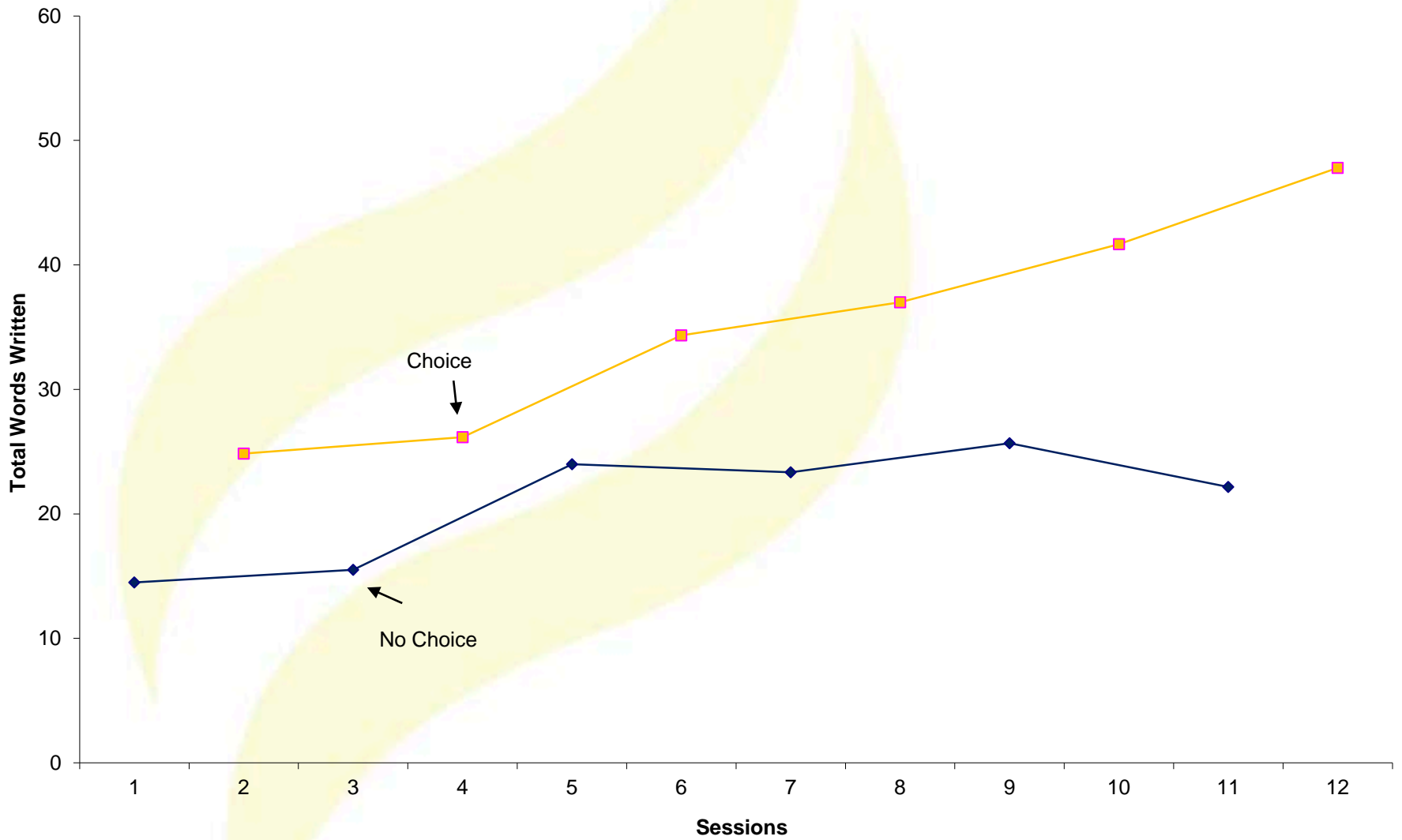
# Rates of Improvement in Writing

Grade	Percentile	Rate of Improvement Fall-Spring*
3rd	55th	0.32-0.39
4th	55th	0.30-0.38
5th	55th	0.26-0.37
* Information was taken from AIMSweb ROI Growth Norms Table for Total Written Words		

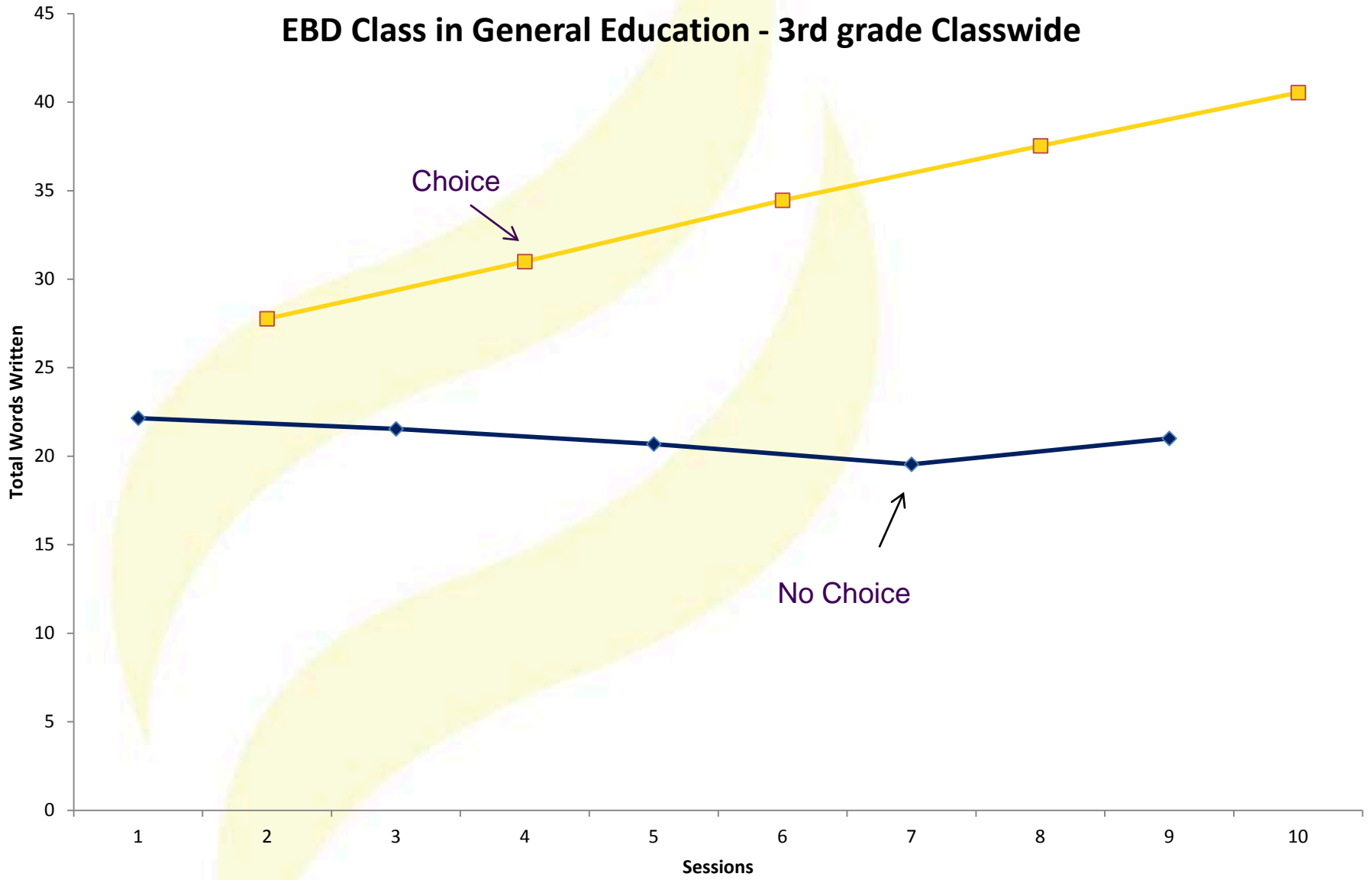
# Methodology

- ◆ **5 Week Study – 10 Sessions**
- ◆ **Elementary School Classroom**
  - Either Choice or No Choice writing sessions
- ◆ **Alternating Treatment Design**
- ◆ **All Participants performed better during the choice condition**
  - Total Words Written

# Approved Private School for EBD

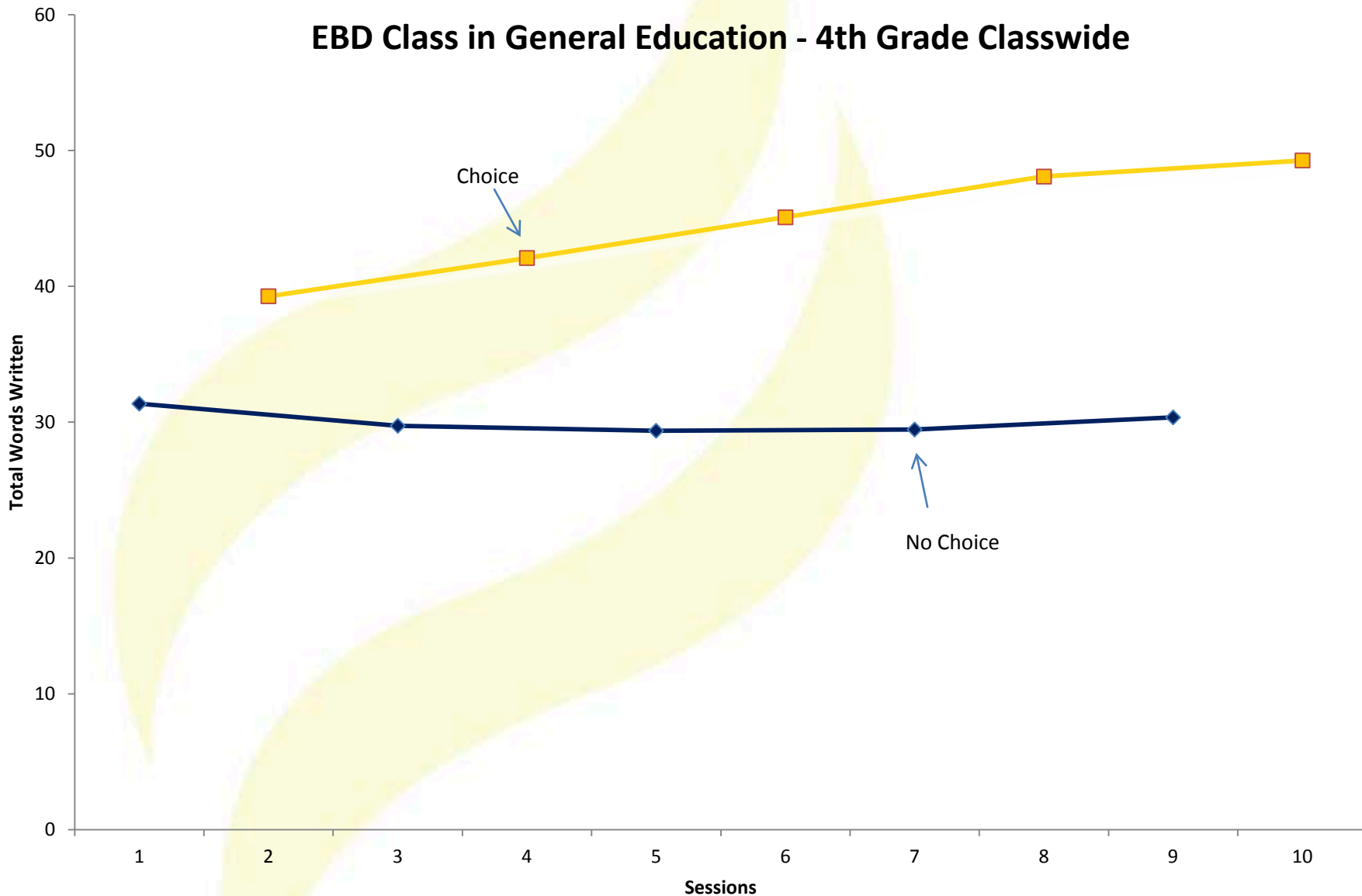


# EBD Class in General Education - 3rd grade Classwide

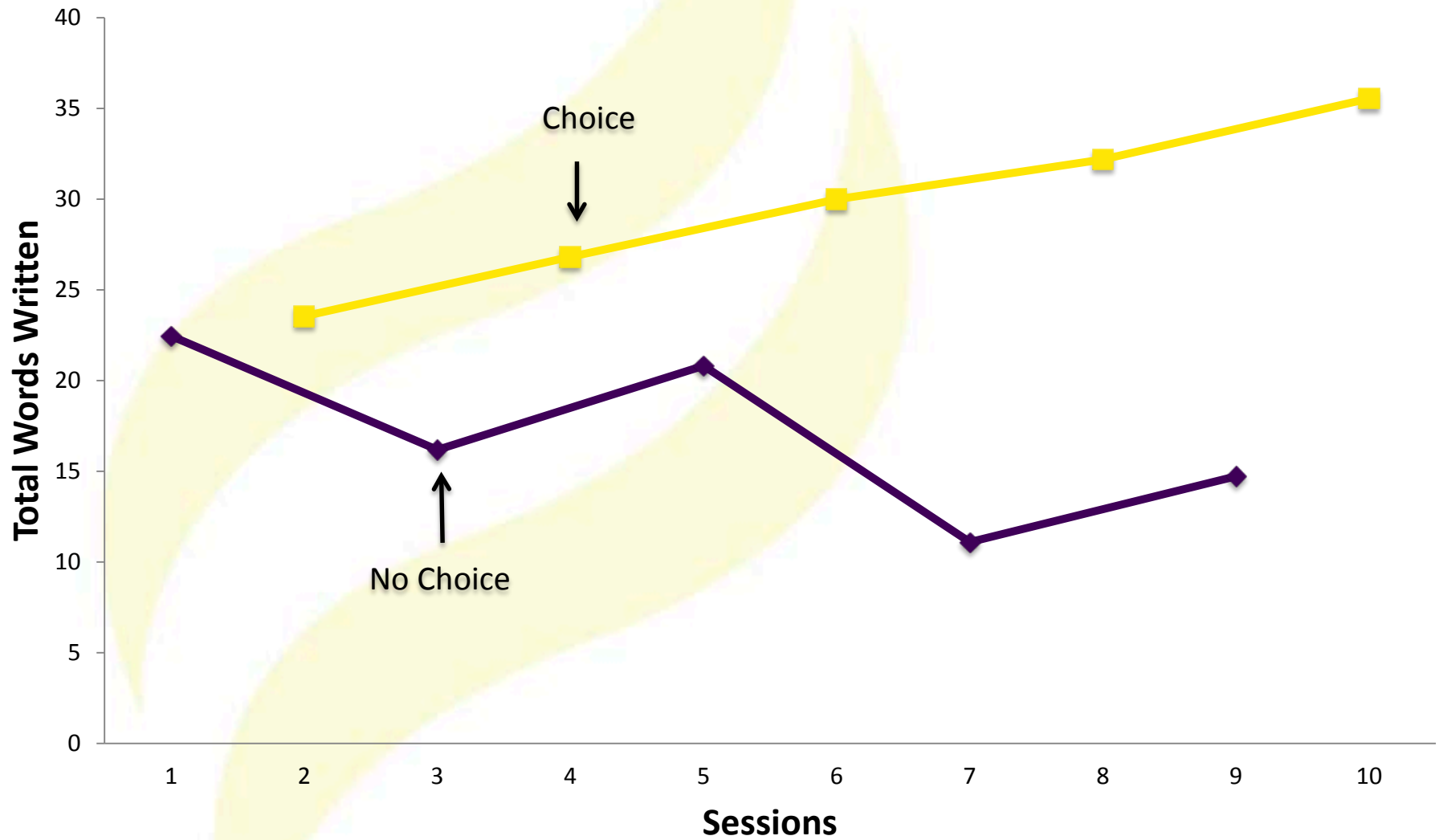




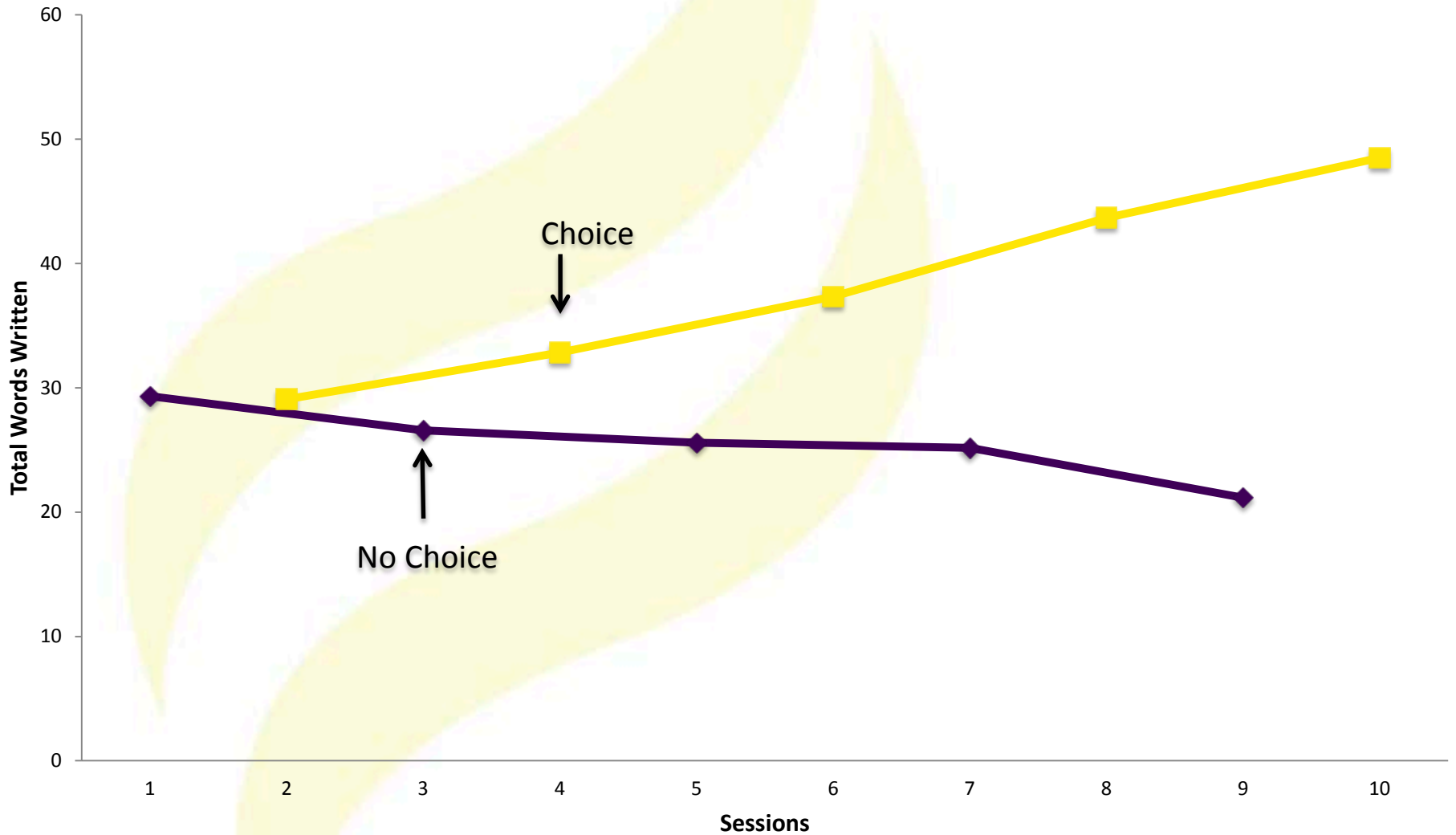
# EBD Class in General Education - 4th Grade Classwide



# EBD Inclusion in General Education - Class 1



# EBD Inclusion in General Education - Class 2



# Rates of Improvement

Condition	Private School	Public School 3 <sup>rd</sup> grade	Public School 4 <sup>th</sup> grade	Inclusion Class #1	Inclusion Class #2
Choice Sessions	3.83	2.56	2.00	1.50	2.42
No Choice Sessions	1.27	-0.24	-0.20	-0.96	-1.02
Average ROIs: 0.26-0.39					

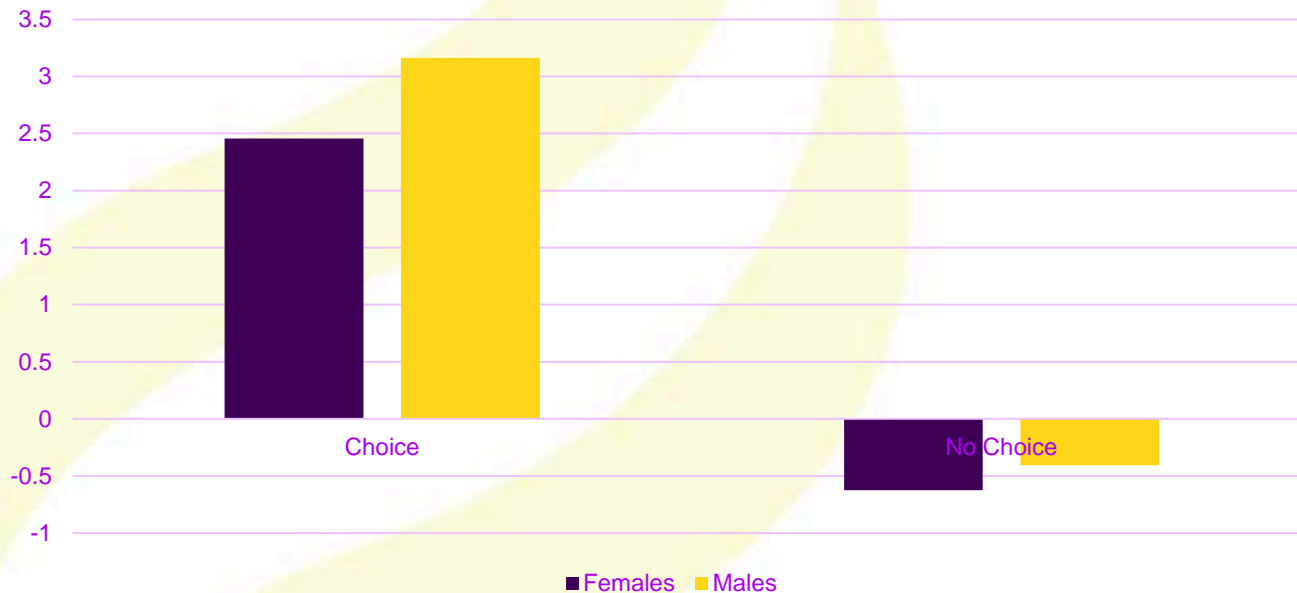
# Current Study

- ◆ **Examine the cumulative archival data of the previous three studies**
- ◆ **Look into gender differences by evaluating ROIs during choice and no choice session**
- ◆ **25 Females**
- ◆ **27 Males**

# Hypotheses

1. **The Choice writing intervention will improve both male and female students' total words written on the writing tasks compared to their academic productivity during no choice sessions.**
2. **The performance of female students in the area of writing will improve more than their male counterparts.**

# Rates of Improvement



	Females	Males
Choice	2.45	3.16
No Choice	-0.62	-0.41

# Results - Choice

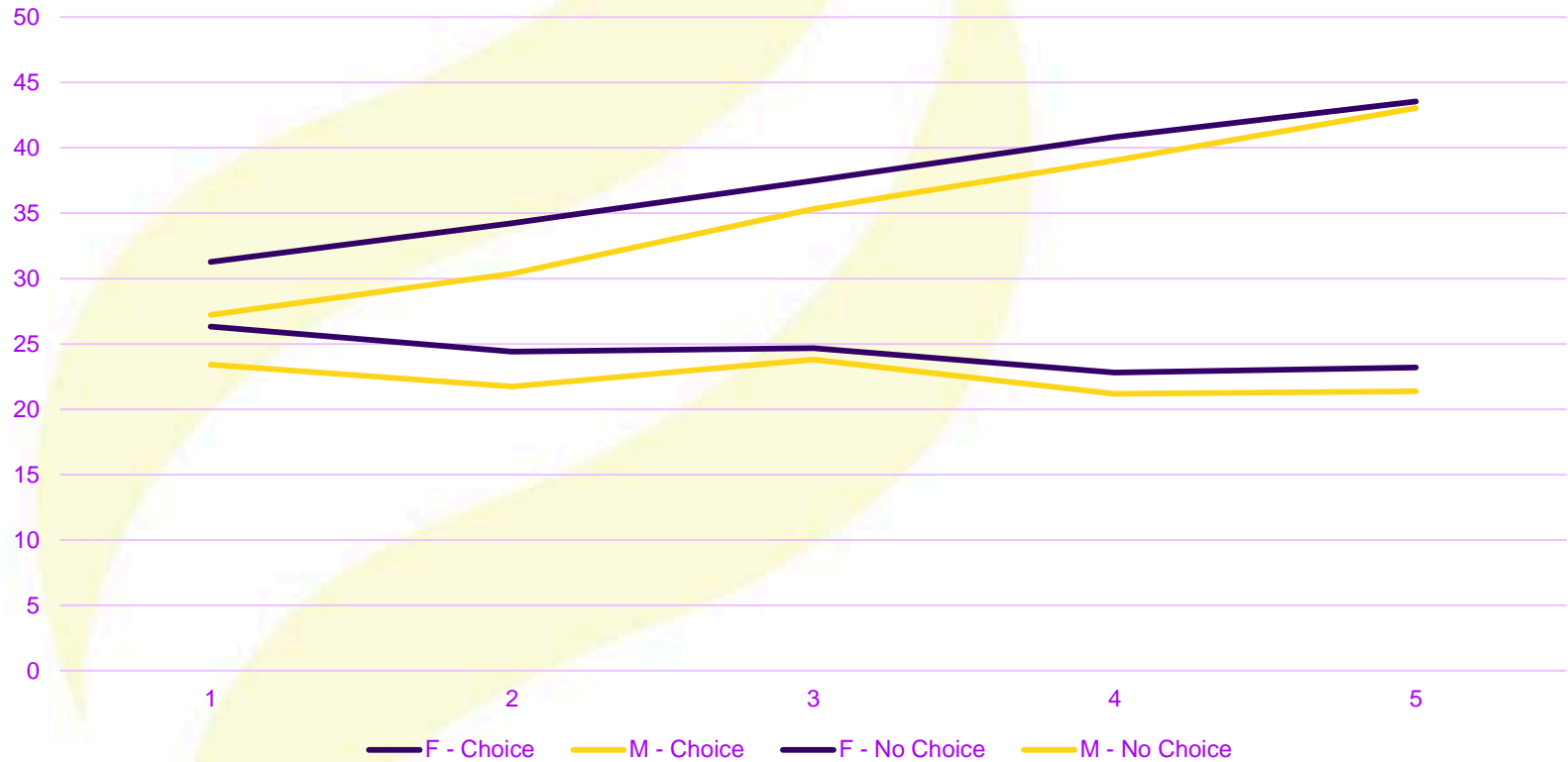
- ◆ A two-tailed, independent samples t-test indicates that male students have higher rates of improvement ( $M = 3.16$ ,  $SD = 1.43$ ), compared to female student's rates of improvement ( $M = 2.45$ ,  $SD = 0.97$ ) during choice sessions. This difference was statistically significant,  $t(50) = -2.059$ ,  $p = .045$ .



# Results – No Choice

- ◆ A two-tailed, independent samples t-test indicates that male students have lower rates of improvement ( $M = -0.41$ ,  $SD = 3.33$ ) compared to female student's rates of improvement ( $M = -0.62$ ,  $SD = 1.73$ ), during the no choice sessions. This difference was not statistically significant,  $t(50) = -0.291$ ,  $p = .772$ . Specifically, there was no significant difference in the rate of improvement between males and females during no choice sessions.

# Weekly Total Words Written Counts



# Implications

- ◆ **When given the opportunity to choose, the rates of improvement are higher than expected**
- ◆ **Males are catching up to female counterparts**
- ◆ **There is a decreasing trend in the No Choice rates of improvement**
  - Students like being able to choose their story starters
  - They are practicing poor skills and being reminded of how bad they are at writing

# Future Research

- ◆ **Currently we are running this study in a general education classroom**
- ◆ **Once males and females start at the same point who increases more?**
- ◆ **What is causing the decreasing trend in the No Choice condition?**

# Acknowledgements

- ◆ **Dr. Carlos Panahon, Ph. D.**
  - Faculty Mentor
- ◆ **Samantha Steinman**
  - Graduate Student Mentor
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**Questions?**