A background image featuring a complex network of black lines and nodes on a light gray background, resembling a web or a data network. The lines vary in thickness and density, creating a sense of depth and connectivity. The overall aesthetic is modern and technical.

*The Impact of Being a  
Procrastinator on Academic  
Success:  
A Case Study in an Online  
Learning Environment*

**Yasemin Tarakci  
Hakan Tarakci**

# Procrastination

pro·cras·ti·nate  
/prə'krastə,nāt/  
*Verb*

delay or postpone action; put off doing something.  
"it won't be this price for long, so don't procrastinate"

*synonyms:*

**delay**, put off doing something, postpone action, defer action, be dilatory, use delaying tactics, **stall**, **temporize**, play for time, play a waiting game, **dally**, drag one's feet/heels, take one's time....

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# The Procrastination Cycle



# The Procrastination Motto

Do it  
~~NOW!~~

Tomorrow



# Procrastination Levels

## levels of procrastination

1. non-procrastinator



2. Sunday-night slacker



3. super slacker



4. master procrastinator



# Procrastination and Academic Success?

Any Relation?

## Procrastination.... Academic success.... Any relation reported?

- ▶ ...”students who showed high procrastination scores performed *below average* in their academics”
- ▶ Nagesh Lakshminarayan, Shrudha Potdar and Siddana Goud Reddy, *Relationship Between Procrastination and Academic Performance Among a Group of Undergraduate Dental Students in India*

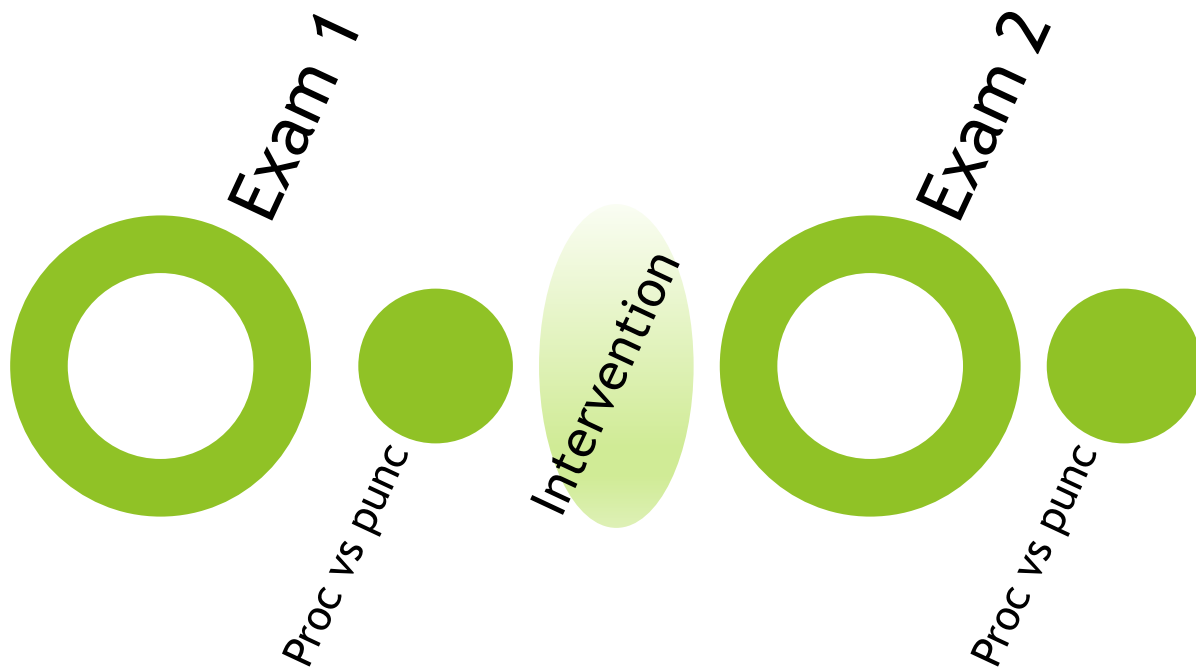
## Procrastination.... Academic success.... Any relation reported?

- ▶ ...” Many studies focused on causes and correlates of academic procrastination; however, the study of *interventions* for academic procrastination is scarce. ”
- ▶ ...” studying procrastination is an impediment to students’ academic performance and outcomes and clarifies the need to *develop and study* academic interventions for academic procrastination as a means to decrease its prevalence in academic settings.”
- ▶ Marina Goroshit, *Academic procrastination and academic performance: An initial basis for intervention*

# Our research..... Setup

- ▶ Students enrolled in an online undergrad quant course
- ▶ Procrastinators vs Punctuals
- ▶ Two online exams

# Setup



# Our research..... Hypotheses

**H3**  
After intervention: No  
difference in academic  
improvement



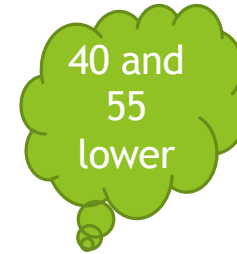
**H1**  
Procrastinators vs  
Punctuals: No difference in  
academic performance

**H2**  
Intervention:  
Procrastinators will not  
change behavior



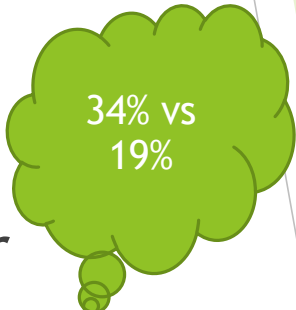
## Our findings.... H1

- ▶ H1: There is no difference in academic performance
- ▶ Results:
  - ▶ Procrastinators performed *worse*:
    - ▶ Exam 1 mean score: 160 (n=57) vs 200 (n=110), *t-stat* (4.22), *p-value*=.0000, n=167
    - ▶ Exam 2 mean score: 180 (n=29) vs 235 (n=123), *t-stat* (3.91), *p-value*=.0000, n=152



## Our findings.... H2

- ▶ H2: There is no relation between intervention and procrastinating
- ▶ Results:
  - ▶ Procrastinators portion is *lower* after intervention
    - ▶ 34% in Exam 1 vs. 19% in Exam 2
    - ▶ Z-score=3.026, p-value=.00122



34% vs  
19%

## Our findings.... H3

- ▶ H3: There is no difference in academic performance improvement
- ▶ Results:
  - ▶ Ex-procrastinators, new-punctuals improved *more* than forever-procrastinators
    - ▶ 181 vs 230 (Exam 1 vs Exam 2), 27% up,  $p$ -value=.0000
    - ▶ 148 vs 176 (Exam 1 vs Exam 2), 19% up,  $p$ -value=.06



27% higher  
scores

# Intervention

Exam 1

Exam 2



Procrastinators

Punctuals  
27% up,  
significant

Procrastinators  
19% up,  
not  
significant



Soooooooo.....  
It may be a good idea  
not to procrastinate?



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Procrastination:  
  
Just Do It...Later



## Next steps

- ▶ Expand the research to additional online and also offline courses
- ▶ Deep dive into the intervention to improve academic success
- ▶ Develop intervention recommendations



The image features a complex network of black lines and nodes on a light gray background, resembling a web or a data network. A prominent horizontal green band with a slight gradient is centered across the image. The text "THANK YOU" is written in a bold, white, italicized sans-serif font, centered within the green band. The overall design is modern and professional, with a focus on connectivity and gratitude.

***THANK YOU***

# Results..... H1 (Exam 1)

t-Test: Two-Sample Assuming Unequal Variances

	<i>Procrastinators</i>	<i>Punctuals</i>
Mean	160.63	200.40
Variance	3,439.31	3,145.67
Observations	57	110
Hypothesized Mean Difference	-	
df	109	
t Stat	(4.22)	
P(T<=t) one-tail	0.00	
t Critical one-tail	1.66	
P(T<=t) two-tail	0.00	
t Critical two-tail	1.98	

# Results..... H1 (Exam 2)

t-Test: Two-Sample Assuming Unequal Variances

	<i>Procastrinators</i>	<i>Punctuals</i>
Mean	180.41	235.71
Variance	5,353.54	1,853.42
Observations	29	123
Hypothesized Mean Difference	-	
df	33	
t Stat	(3.91)	
P(T<=t) one-tail	0.00	
t Critical one-tail	1.69	
P(T<=t) two-tail	0.00	
t Critical two-tail	2.03	

## Results..... H3

GROUP 1: STAYED PROCASTRINATOR			
t-Test: Paired Two Sample for Means			
	<i>Exam 1 Score</i>	<i>Exam 2 Score</i>	
Mean	148.2352941	175.7647059	0.185714
Variance	2500.941176	5380.941176	
Observations	17	17	
Pearson Correlation	0.407546736		
Hypothesized Mean Difference	0		
df	16		
t Stat	-1.622888238		
P(T<=t) one-tail	0.062074428		
t Critical one-tail	1.745883676		
P(T<=t) two-tail	0.124148856		
t Critical two-tail	2.119905299		
GROUP 2: BECAME PUNCTUAL			
t-Test: Paired Two Sample for Means			
	<i>Exam 1 Score</i>	<i>Exam 2 Score</i>	
Mean	181.2	230.4	0.271523
Variance	3201.268966	2059.696552	
Observations	30	30	
Pearson Correlation	0.693058337		
Hypothesized Mean Difference	0		
df	29		
t Stat	-6.532605479		
P(T<=t) one-tail	1.86824E-07		
t Critical one-tail	1.699127027		
P(T<=t) two-tail	3.73648E-07		
t Critical two-tail	2.045229642		