Stephen Provost and Frances Martin

TEACHING STUDENTS TO DISCRIMINATE BETWEEN GOOD AND POOR WRITING

THE PROBLEM(S)

- Students do not appear to understand and value feedback
- We have difficulty providing feedback
- How did you learn to write?
- Can't operate one-to-one

Qualitative indicators of performance in each section of the lab report will be given on the following scale:
D=poor, C=acceptable, B=above average, A=excellent

Title:
Not longer than 15 words, effective descriptor   y/n
Is there a word count (not including tables and references)   y/n
Abstract:
Is it less than 150 words? y/n
Does it clearly indicate:
         Why the experiment was conducted?
         What method was employed?
         What the general nature of the results were?

Introduction:
Describes relevant theories and prior research in this area?   y/n
Provides evidence of understanding of the literature?   y/n
Has the student read at least six primary sources in the area?   y/n
How well has the rationale for the experiment been explained?
Clarity of language and expression?
Additional comments:
Methods:
This has been provided and will not be marked.
Results:
Statistical analysis is NOT required. Quality of the presentation?
Quality of the description?
Linked to introduction   y/n
Discussion:
Does the discussion fit well with the intro?
Does the student clearly understand the implications of the results?
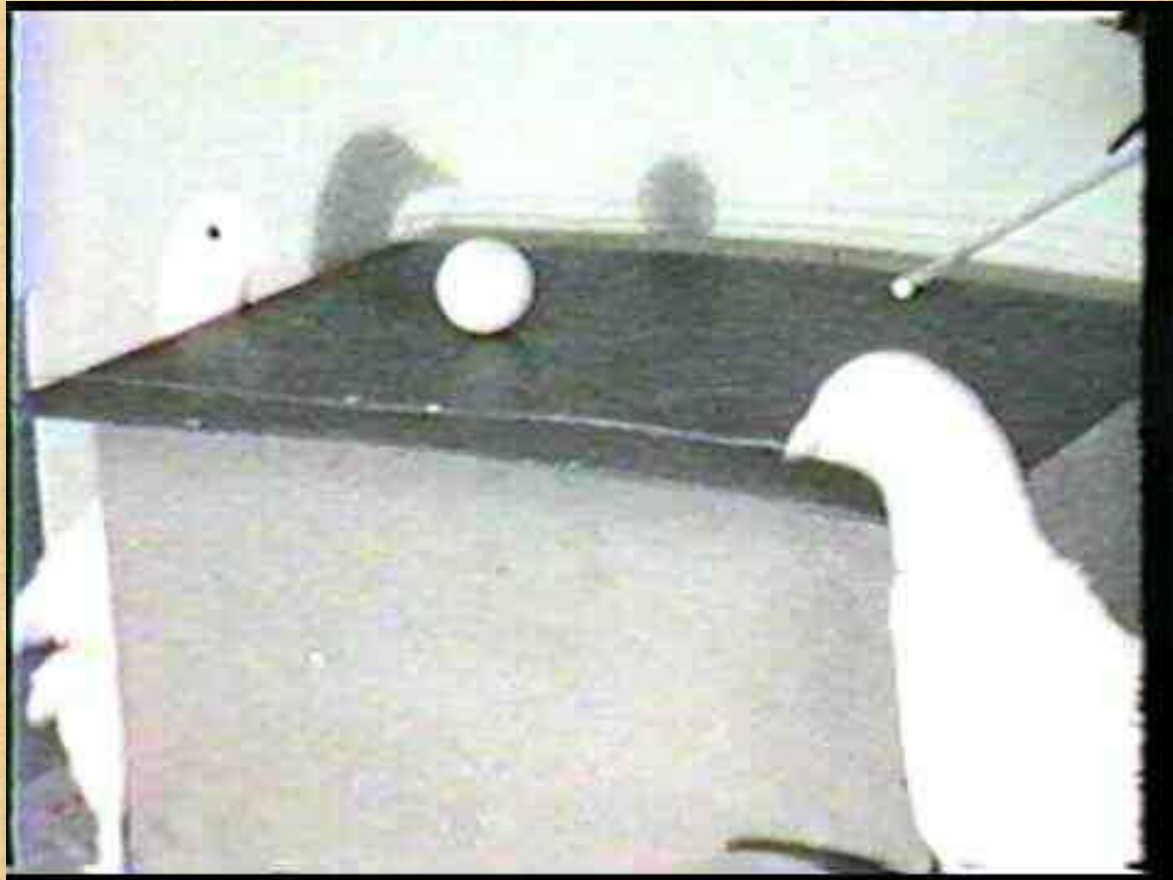Clarity of expression and style?
Quality of original ideas, future experiments, etc?
Overall:
Broadly follows APA referencing style, as outlined in Shaunessey et al, O'Shea, etc?   y/n
General comments:

I TEACH the principles of reinforcement: why can't I USE them?

WHAT DO WE KNOW ABOUT FEEDBACK (AKA REINFORCEMENT)?

* Reinforcement works best if it is immediate
* Behaviour is strongest if you arrange differential reinforcement
* Punishment only works if you offer alternative behaviours THAT ARE WITHIN THE CAPACITY OF THE ORGANISM and which lead to positive reinforcement

THE PROJECT

* University of Tasmania small teaching and learning grant in 2011 (Thank you!)

* Extracted sentences from student writing that typified poor expression.

* Rewrote them to provide examples of good expression

* Asked students to discriminate between them in workshop

METHODS

* Discrimination workshop vs. traditional exposition

* N = 156. Lab classes randomly allocated to group

* Cross-over design for equity and ethics

* Following each workshop students completed a genuine, but small piece of written work

* We used the six sub-group quality scale (Phadtare, Bahmani, Shan & Pietrobon, 2009), 2 raters (not involved in teaching unit).

"LITERACY" (VOCABULARY) TEST

✕ You should show the reader that the point you are making is <u>valid</u>.
  + Understandable
  + Relevant
  + Similar
  + New
✕ <u>Proximal</u>
  + Nearest
  + Loudest
  + Important
  + Longest

VOCABULARY
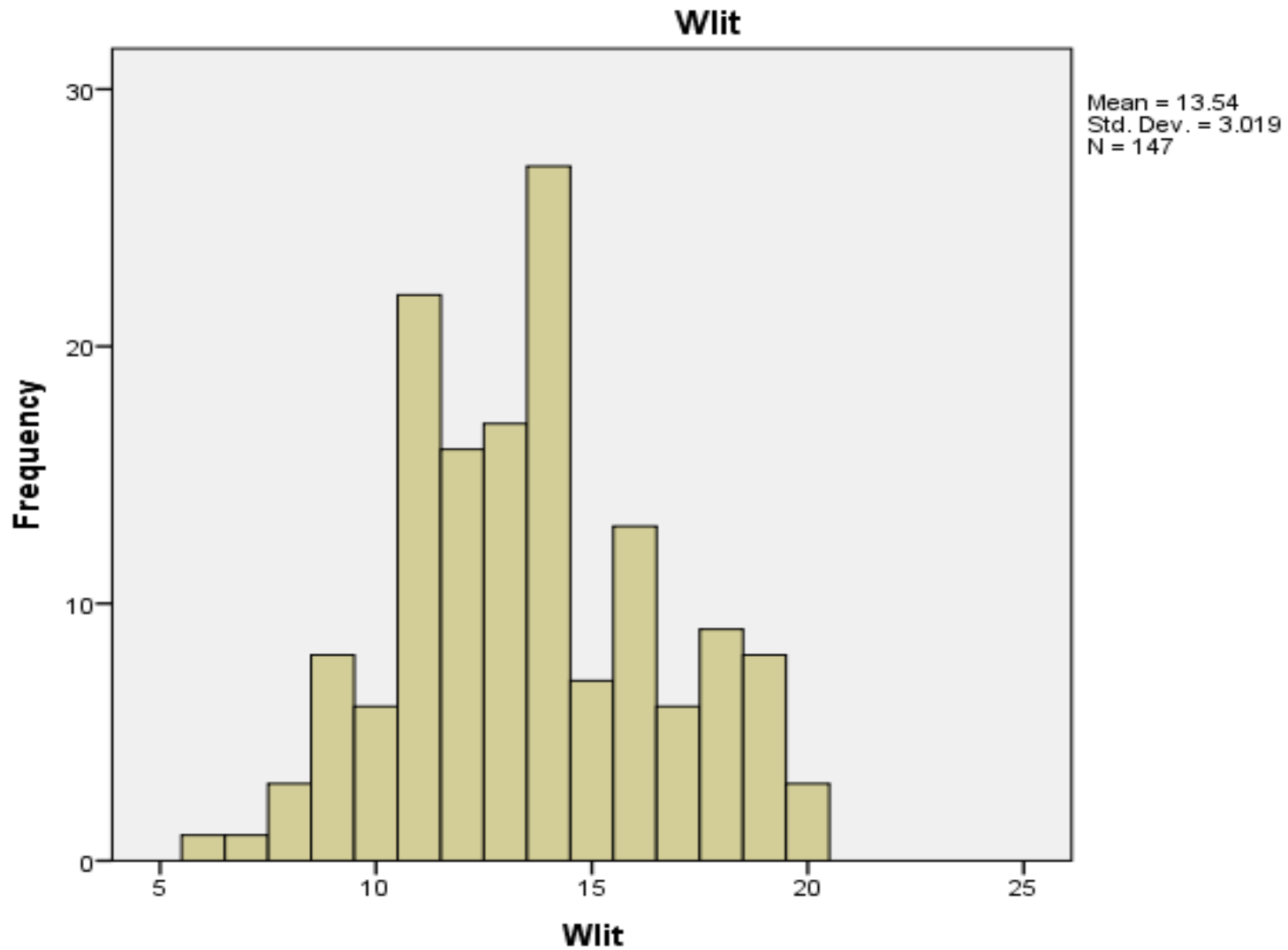
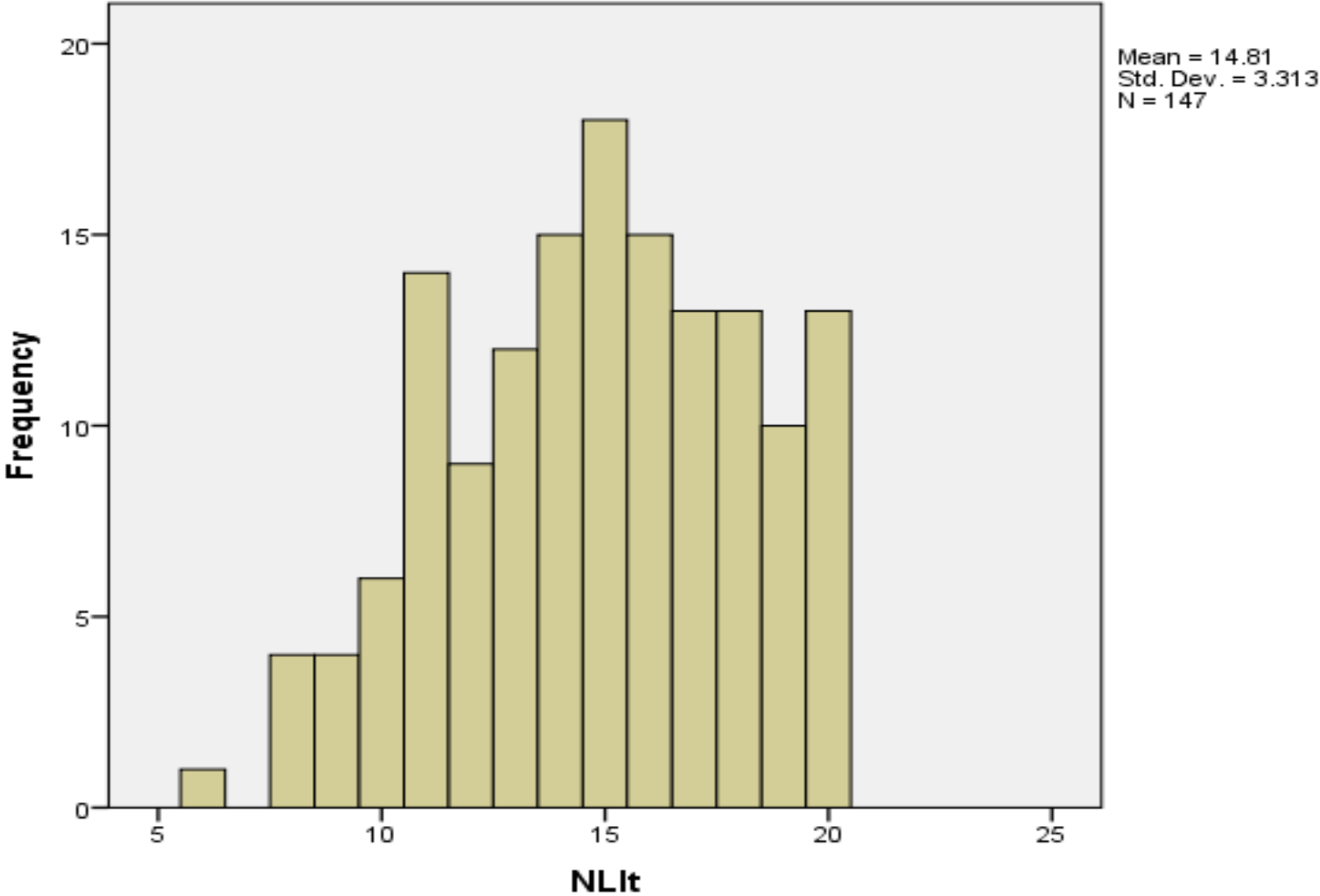# Numeracy Test

- 8^2 = ?
- $\sqrt{25}$ = ?
- 40% of 60 = ?
- If $a = lm / \sqrt{x}$, and $l = 2$, $m = 3$, $x = 9$ then a = ?
- If $p < 0.05$, then a possible answer for p = ? is:
 - 1.2
  - 0.4
  - 0.03
  - 0.06

NUMERACY

SSQS RESULTS

* Inter-rater reliability of SSQS:
  + Pretest: .67
  + Posttest 1: .49
  + Posttest 2: .48
* Illustrates one of the problems of assessment and feedback
* In the same range as correlations for assessment generally (e.g., Steve Newstead's work)

FACTOR ANALYSIS OF SSQS

Items	DWS	SWS
All sentences are entirely clear on first reading.		.716
There are no consistent errors in tense usage		.755
Almost no grammatical errors		.804
No misspelled words		.663
High-level scholarly engagement and inquiry	.817	
Ideas are compared and contrasted from at least two perspectives	.855	
There is logical flow of argument	.804	
Writing style appropriately addresses a scientific audience	.745	
Paragraphs are well arranged; transitions between ideas are efficient	.770	
Sentences are correctly structures, logical and coherent		.712
Perspective is original and mature with sophisticated language use	.759	
A refined and developed understanding of the material is apparent	.862	

SSQS SUBSCALES BY GROUP
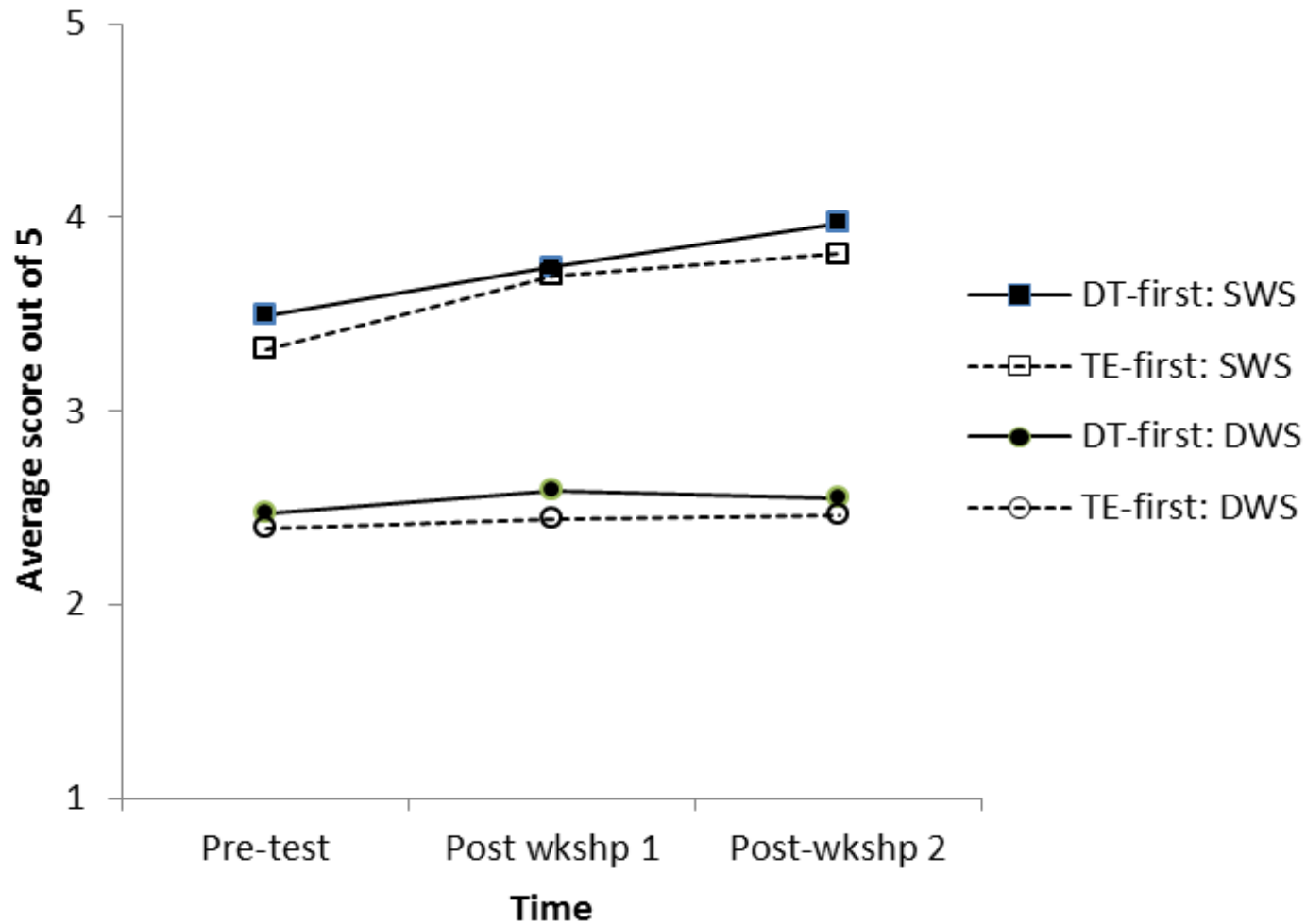
ASSESSMENT BY GROUP
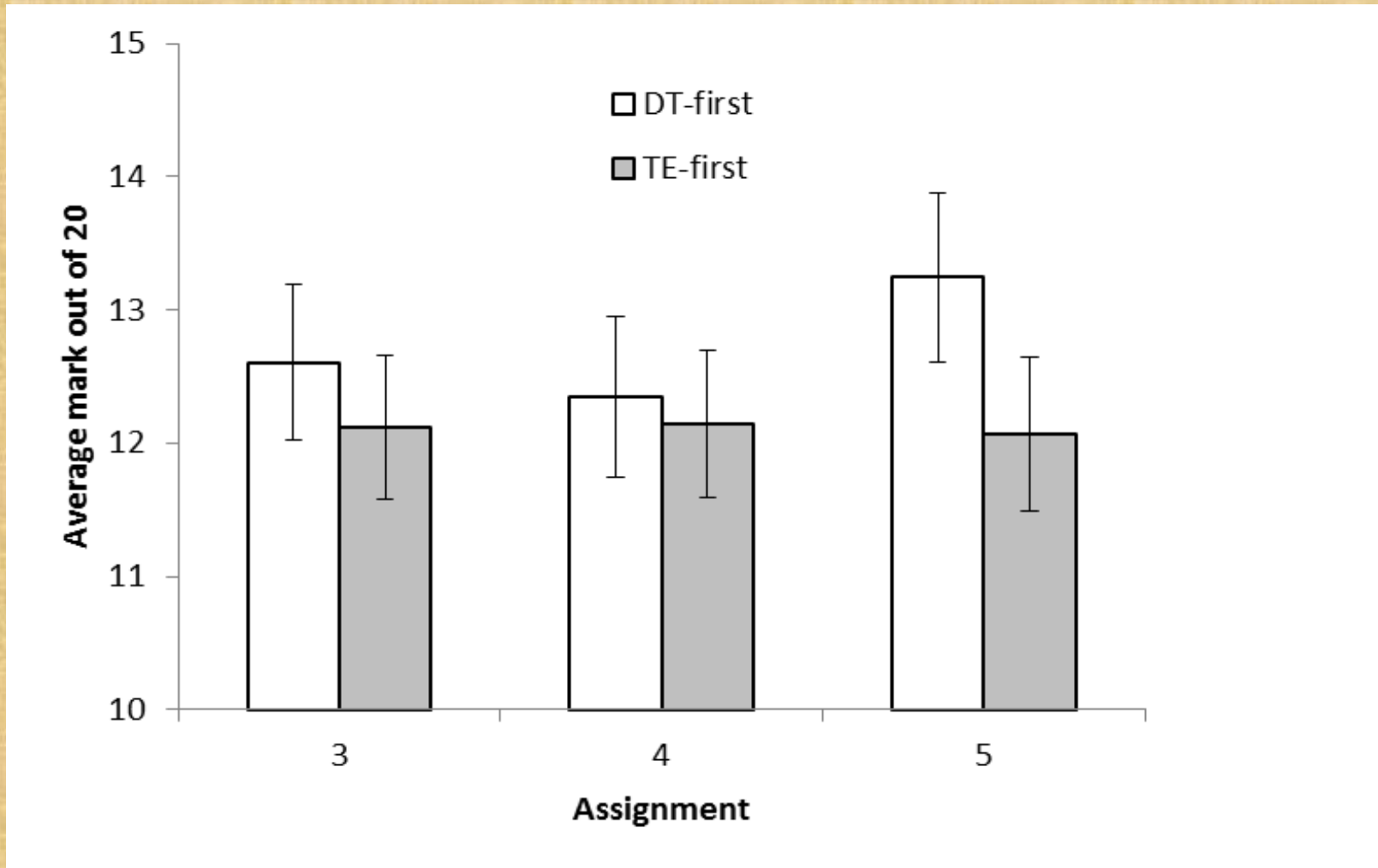
Bars show 95% confidence intervals

REGRESSION ON ASSIGNMENT 5 (R^2=.21)

Model		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
1	(Constant)	3.987	1.806		2.207	.030
	SexN	-.333	.539	-.058	-.617	.539
	Wlit	.193	.074	.269	2.607	.011
	NLIt	.099	.070	.141	1.412	.161
	DiscPre	.100	.124	.083	.803	.424
	DiscPost	.310	.148	.218	2.091	.039

a. Dependent Variable: Ass5

REGRESSION ON EXAM (R^2=.40)

Model		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
1	(Constant)	19.435	7.937		2.449	.016
	SexN	-8.020	2.384	-.276	-3.364	.001
	Wlit	1.004	.326	.277	3.079	.003
	NLIt	1.238	.310	.347	3.997	.000
	DiscPre	-.283	.548	-.046	-.516	.607
	DiscPost	2.102	.644	.296	3.265	.002

a. Dependent Variable: Exam

DISCRIMINATION SCORE 3 AND EXAM
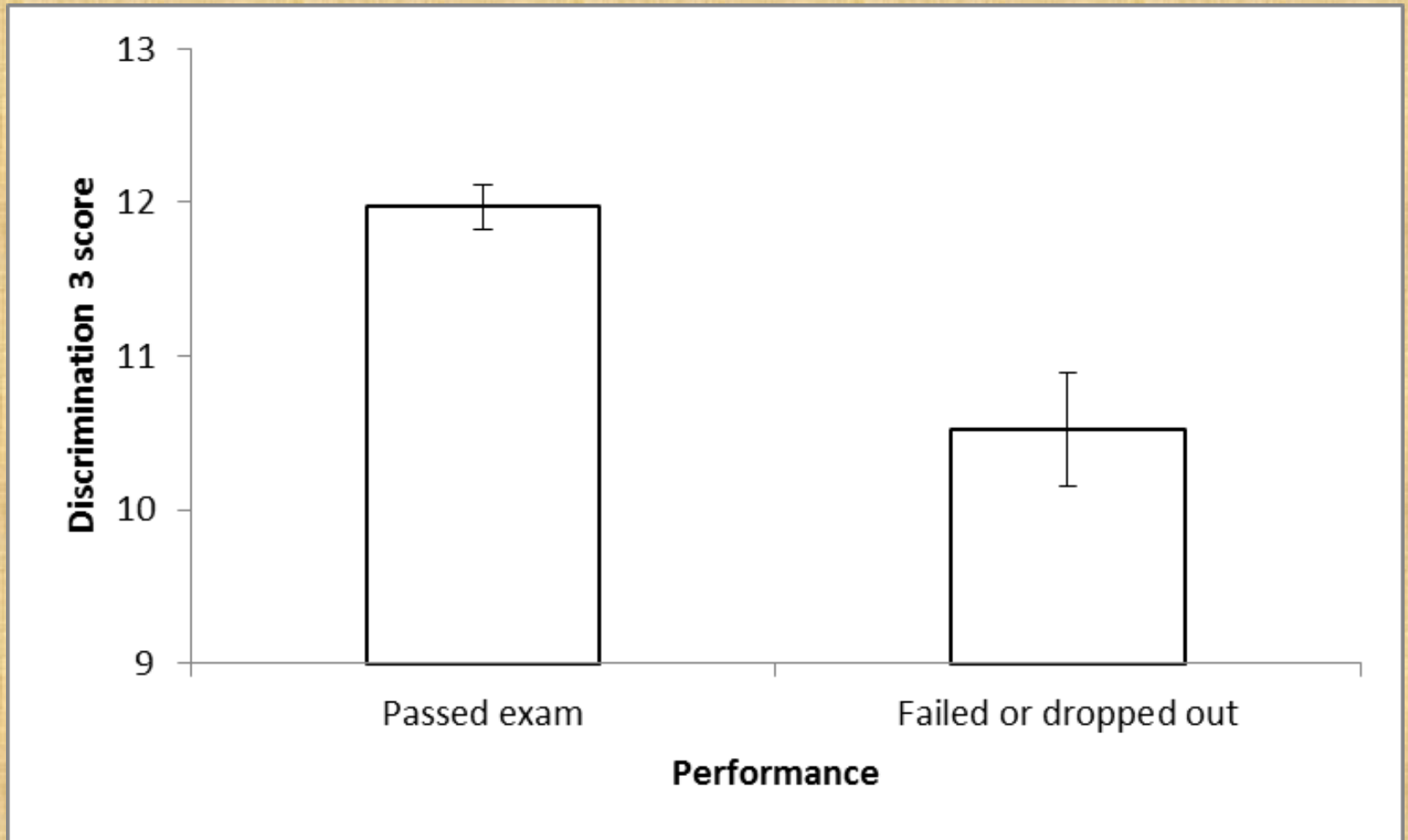
Bars show SE of the mean

CONCLUSIONS

- ✖ Ability to discriminate good from poor writing does appear to be meaningfully related to academic performance and attrition.

- ✖ Writing appears to improve, but only surface skills change, not deep skills.

- ✖ More development is needed of instruments to evaluate writing skills.

- ✖ Our efforts to teach discrimination skills was less successful than hoped, but practical design issues hampered a proper test.

- ✖ Current efforts are designed to work around some of these issues, and we will have more data shortly we hope.

Please choose one of the sentences below that best expresses the writer's opinion:

a) It is conventional on the last slide of a powerpoint presentation to have some indication that the presenter has finished and is ready to take questions.

b) When the talker has finished talking they usually got something on there slide saying "Thank's" and if you's have any questions then better ask them now or somethink like that because this is the last slide and I haven't got nothing more to say.