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 **valid**.
  - Understandable
  - Relevant
  - Similar
  - New

- **Proximal**
  - Nearest
  - Loudest
  - Important
  - Longest
Vocabulary
NUMERACY TEST

- $8^2 = ?$
- $\sqrt{25} = ?$
- 40% of 60 = ?
- If $a = \frac{lm}{\sqrt{x}}$, 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
Mean = 14.81
Std. Dev. = 3.313
N = 147
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

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

![Graph showing average scores over time for different groups.](image-url)
ASSESSMENT BY GROUP

Bars show 95% confidence intervals
### Regression on Assignment 5 (R² = .21)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
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<tbody>
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<td><strong>B</strong></td>
<td><strong>Std. Error</strong></td>
<td><strong>Beta</strong></td>
<td><strong>t</strong></td>
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<tr>
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<td>- .617</td>
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<td></td>
<td>DiscPre</td>
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<td>DiscPost</td>
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a. Dependent Variable: Ass5
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<th>Unstandardized Coefficients</th>
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<td>B</td>
<td>Std. Error</td>
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<td>Sig.</td>
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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.