



# New Knowledge about Writing

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The Center for Assessment

2002 Annual Large Scale  
Assessment Conference



# Greetings from Pennsylvania

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- Thanks to PDE staff for supporting this study
- Thanks to DRC for successfully completing all the tasks



# Background

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- Chapter 4
- Student-level reporting for first time
- Moderate stakes for grade 11 students
- Concern for reliability of writing scores
- Concern about amount of time and money for scoring
  - Requirement that results be reported by standard



# Three Goals

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- Generalizability Study
  - More tasks needed?
    - Each additional task adds 10 weeks to reporting schedule and \$500,000 to cost
- Determine optimal adjudication rules
- Study to see whether scoring system produces subscores that provide unique information



# Data Needed

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- 1800 students respond to four prompts each
- Six studies of 300 students each
  - 1—Four narrative prompts
  - 2—Four informational prompts
  - 3—Four persuasive prompts
  - 4—Two narrative and two persuasive
  - 5—Two info. and two persuasive
  - 6—Two narrative and two info.



# Scoring

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- Each paper scored by 2 teams of 15 scorers
- 3 scorers from each team scores each paper



## Scoring, cont'd.

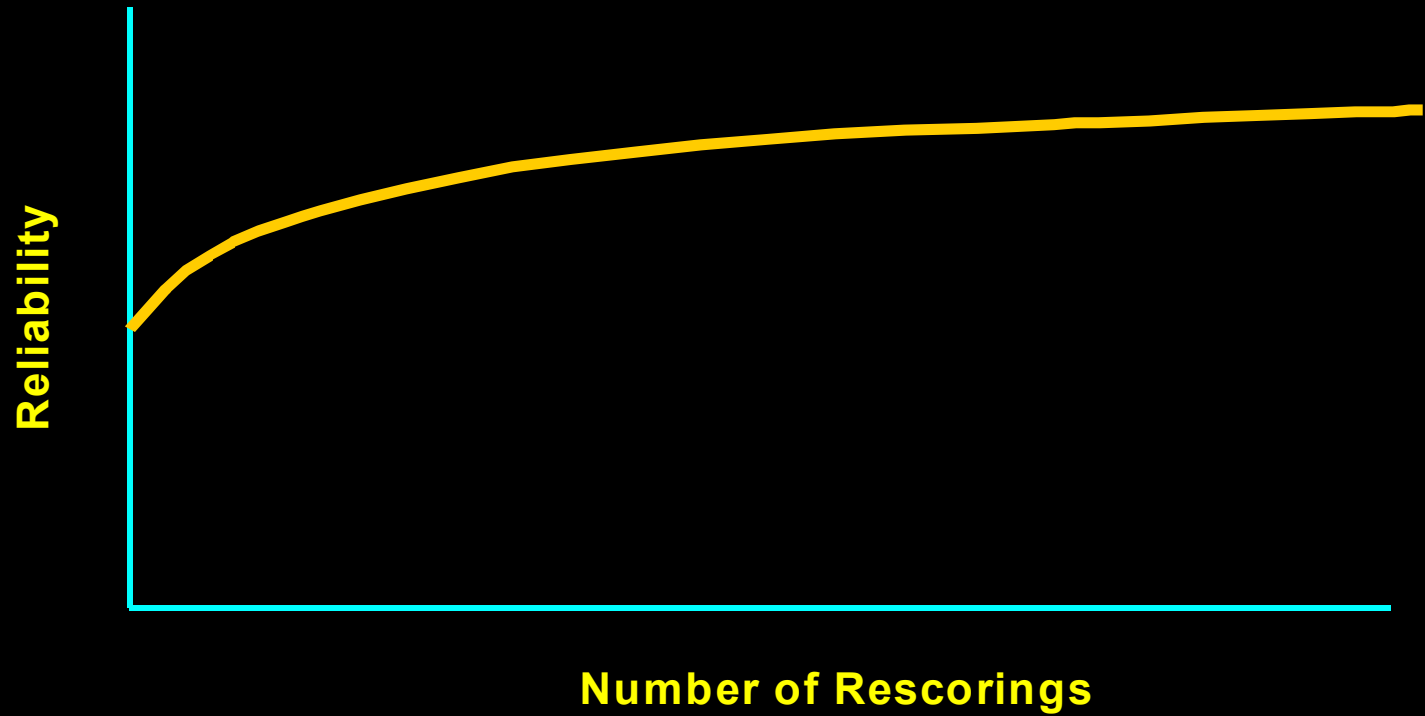
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- Each team consists of 3 scorers
- For a given adjudication rule
  - Score every paper by both teams using that rule
  - Determine the number of scorings
  - Determine the consistency between the two teams



# Desired Data

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# Initial Look

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	No Adjudication
% Additional Rescores	0
Correlation	.85
Ave. Diff.	2.6
% within 2	64



# Initial Look

	No Adjudication	Adjudicate Any Discrepancy
% Additional Rescores	0	79
Correlation	.85	.85
Ave. Diff.	2.6	2.5
% within 2	64	68



# Focus on Final Decision—One Paper

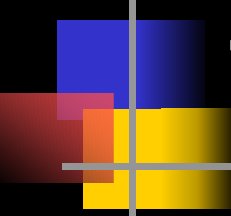
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1. Adjudicate nothing
  - A. Both pass
  - B. Either passes
2. Adjudicate if passed by one but failed by another—pass if 3<sup>rd</sup> scorer passes
3. Adjudicate if within 4 points of passing—pass if total of two highest scores  $\geq 25$



# Results for One Paper

	1A	1B	2	3
% Rescored	0	0	18	19
% Failed by Both Teams	33	18	26	18
% Passed by One Team but Failed by Other Team	18	14	13	12



# Focus on Final Decision— Three Papers

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- Adjudicate nothing
- Adjudicate any paper failed by one scorer but passed by second; take sum of two highest scores
- Adjudicate any paper within 4 of passing; take sum of two highest
- Adjudicate any paper of 11 or 12; take sum of two highest
- Adjudicate any total of 71-74; rescore all three papers and take sum of two highest scores on each



# Results for Three Papers

	1	2	3	4	5
% Rescored	0	18	15	28	7
% Failed by Both Teams	21	19	20	19	18
% Passed by One Team but Failed by Other Team	9	9	8	9	8



# Correlations among Ratings

	1	2	3	4	5
1	1.00	.80	.83	.72	.60
2		1.00	.80	.76	.57
3			1.00	.76	.63
4				1.00	.66
5					1.00



# Same Scorer \ Different Scorer

	1	2	3	4	5
1	.62\.66	.64	.63	.59	.49
2	.66	.76\.70	.63	.60	.48
3	.58	.64	.62\.66	.59	.51
4	.50	.62	.55	.50\.64	.52
5	.49	.51	.53	.43	.64\.61





# Same Scorer Twice

	1	2	3	4	5
1	.62	.66	.58	.50	.49
2	.96	.76	.64	.62	.51
3	.94	.93	.62	.55	.53
4	.90	1.00	.99	.50	.43
5	.78	.78	.84	.76	.64

# Each Scorer Scores One Domain



	1	2	3	4	5
1	.51	.61	.58	.55	.45
2	.99	.74	.67	.63	.46
3	1.00	.96	.66	.59	.48
4	1.00	1.00	1.00	.50	.50
5	.81	.68	.76	.91	.61

# Same Scorer, Same Student, Different Paper

	1	2	3	4	5
1	.49	.51	.49	.48	.43
2	.99	.54	.50	.50	.42
3	1.00	.97	.49	.48	.44
4	.96	.95	.96	.51	.45
5	.84	.79	.86	.87	.53

# Different Scorer, Same Student, Different Paper

	1	2	3	4	5
1	.47	.49	.47	.47	.41
2	.99	.52	.48	.48	.41
3	1.00	.97	.47	.47	.42
4	.98	.95	.98	.49	.45
5	.85	.81	.88	.92	.49



# Grade 6

	1	2	3	4	5
1	1.00	.76	.78	.73	.64
2		1.00	.81	.79	.66
3			1.00	.80	.70
4				1.00	.76
5					1.00



# Grade 9

	1	2	3	4	5
1	1.00	.85	.84	.81	.80
2		1.00	.85	.82	.79
3			1.00	.84	.81
4				1.00	.87
5					1.00



# Grade 6

	1	2	3	4	5
1	.38	.39	.41	.41	.42
2	.96	.43	.43	.44	.42
3	1.00	.99	.44	.46	.45
4	.98	.97	1.00	.48	.49
5	.93	.87	.92	.96	.54



# Grade 9

	1	2	3	4	5
1	.46	.47	.47	.47	.47
2	1.00	.48	.48	.48	.48
3	.99	.99	.49	.49	.49
4	.98	.98	.99	.50	.50
5	.97	.97	.98	.99	.51





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For info on data set, contact:

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