

Failing or passing for diplomas in secondary education

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Overview

- Background
- Decision rule for diplomas
- School examinations and central examinations
- Set up and method
- Results
- Conclusions and discussion

Background

- Research of the inspectorate and prof. Dronkers indicates differences between the grades on school examinations and central examinations at end of secondary education.
- These differences vary between schools and school types (vmbo, havo, and vwo).
- 19 Sept. 2007: Assistant Secretary of Education (OCW) wants to investigate the possibilities of *weighing the performance on central examinations differently*.



Decision rule for havo and vwo

- Examination resolution, article 49: At most one final grade four and one final grade five with at most one fail grade on the subjects of the selected profile.

geslaagd



gezaakt

Decision rule for havo and vwo

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Meanwhile...

- Sep. 2007, advice of profile committees: Unlink SE and CE.
- Sep. 2007, report of inspectorate: Intervene when differences between SE and CE are excessively large.
- Nov. 2007, advice of education council: Compulsory pass grades for NL, EN, and MA.

...meanwhile...

- Jan. 2008, advice committee Meijerink:
Compulsory pass grades for NL and MA.
- Feb. 2008, advice committee Dijsselbloem:
Unlink SE and CE.



...at the Department of Education

23 Okt. 2008: “Van Bijsterveldt tightens examination requirements”.

- Average CE-grade sufficient.
- At most one five on final grade list for NL, EN or MA.



School and central examinations

- What are the differences between SE and CE?
- Where can the biggest differences be found?

Differences between SE and CE

- Examination data on 2004-2006

Schooltype	Students	% Fail	Mean SE	Sd. SE	Mean CE	Sd. CE	Difference
Vwo	91714	6.5	6.90	0.87	6.44	1.20	0.46
Havo	124899	10.0	6.52	0.79	6.22	1.10	0.31
Vmbo-tl	127711	5.4	6.61	0.82	6.38	1.10	0.23

- But: More subjects in SE than in CE.

Differences between SE and CE

- Only subjects with both SE and CE:

Schooltype	Students	Mean SE*	Sd. SE*	Mean CE	Sd. CE	Vershil
Vwo	91714	6.80	0.86	6.44	1.20	0.36
Havo	124899	6.45	0.79	6.22	1.10	0.23
Vmbo-tl	127711	6.54	0.81	6.38	1.10	0.16

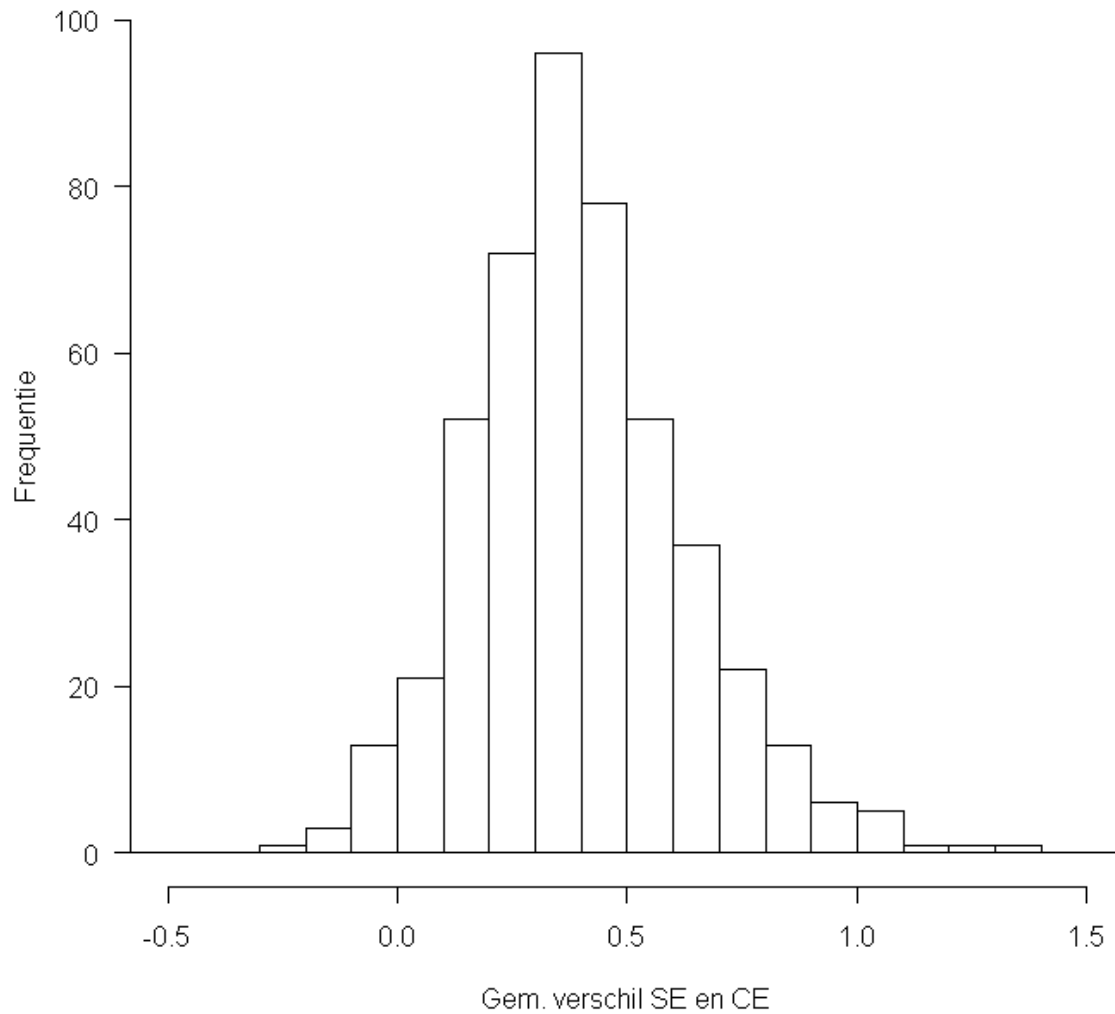
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- Here: Focus on vwo.
- How big is the difference between schools?

School differences in vwo



Set up and method

- The goal is to weigh performance on CE differently.
- Here: Apply a different decision rule.

Alternative decision rules

0	Current decision rule
1	Current decision rule and average CE grade sufficient
2	Current decision rule and CE grade NL, EN and MA sufficient
3	Current decision rule and final grade NL, EN and MA sufficient
4	Current decision rule on SE and CE
5	Current decision rule and average CE grade sufficient with at most one five on CE for NL, EN, and MA
6	Current decision rule and average CE sufficient with at most one five on final grade list for NL, EN, and MA

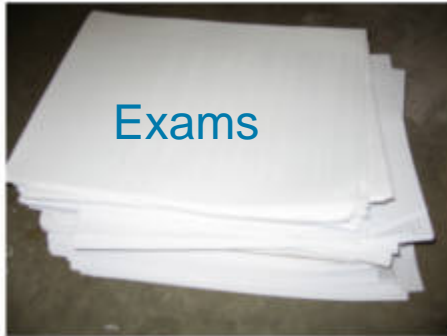


Set up and method

- The goal is to weigh performance on CE differently.
- Here: Apply a different decision rule.
- Two indicators:
 - Impact: Percentage of students failing.
 - Measurement precision: Percentage of misclassified students.



Percentage failing: Standards



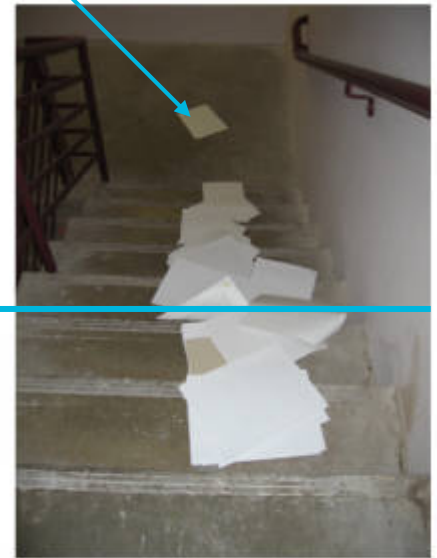
Sufficient

?

Insufficient



10?



Measurement precision

- Percentage misclassifications of one exam can be determined as follows:

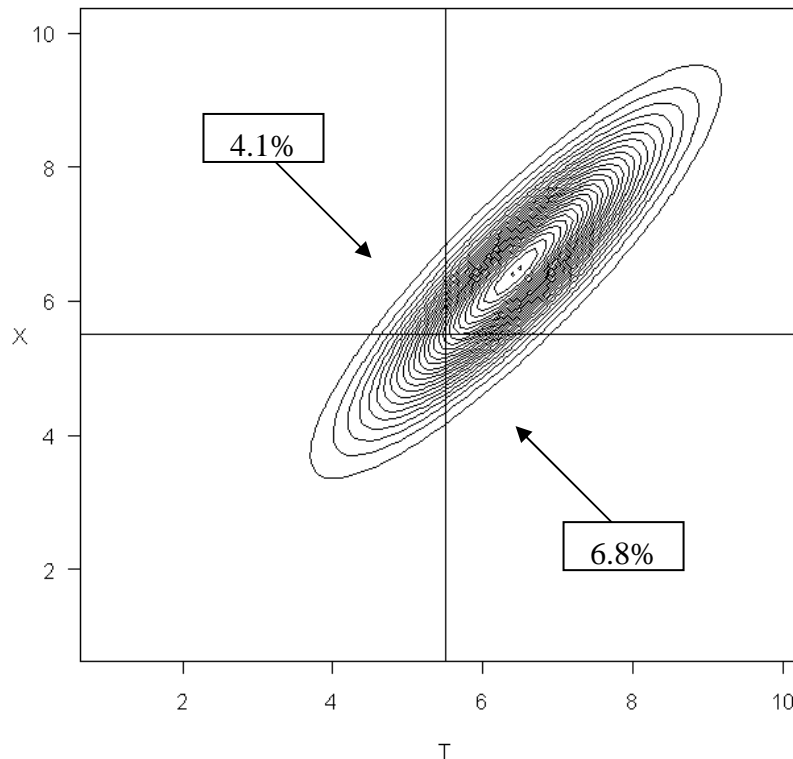
		Ability (score without measurement error)	
		Insufficient	Sufficient
Grade (score with measurement error)	Insufficient	Correct classification	Misclassification
	Sufficient	Misclassification	Correct classification

- Determinants: distribution of scores, the standard (cut score) and reliability.



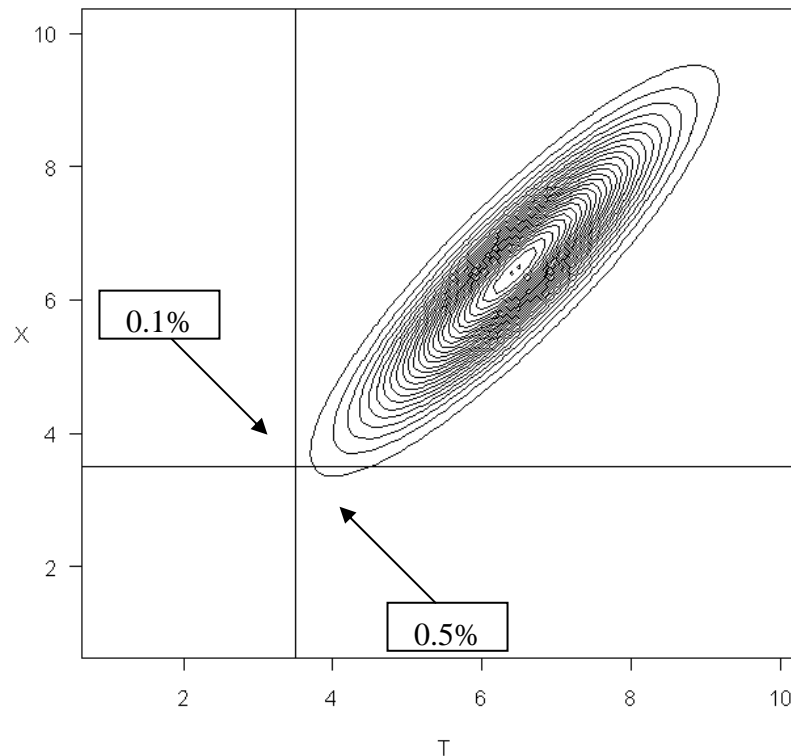
Measurement precision

- Mean: 6.44; Sd: 1.20; Reliability: 0.79
- Cut score: 5.5
- Misclassifications: 10.7%



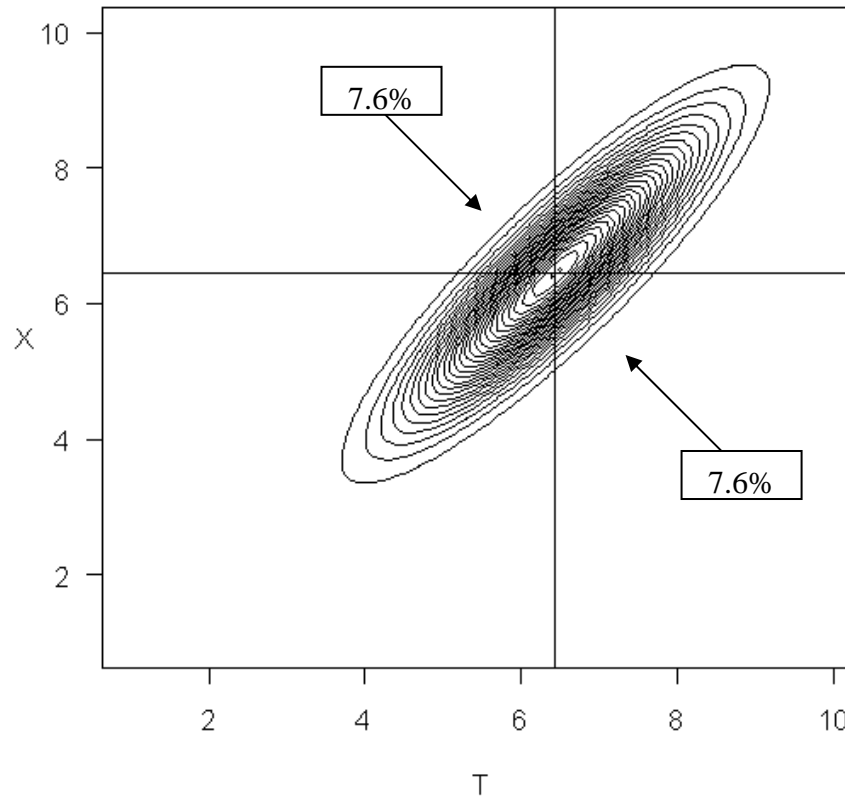
Measurement precision

- Cut score: 3.5
- Misclassifications: 0.6%



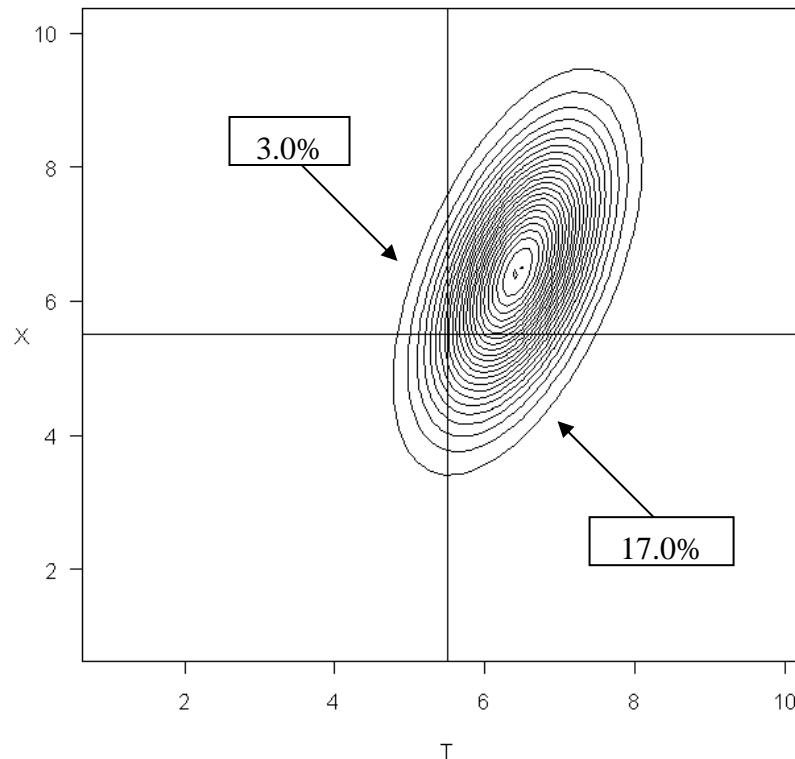
Measurement precision

- Cut score: 6.44
- Misclassifications: 15.2%



Measurement precision

- Cut score: 5.5
- Reliability: 0.30
- Misclassifications: 20.0%



Measurement precision

- The percentage of misclassifications of the total of examinations can be determined by combining the different subjects:

		Ability (scores without measurement error)	
		Fail	Pass
Outcome (scores with measurement error)	Fail	Correct classification	Misclassification
	Pass	Misclassification	Correct classification