

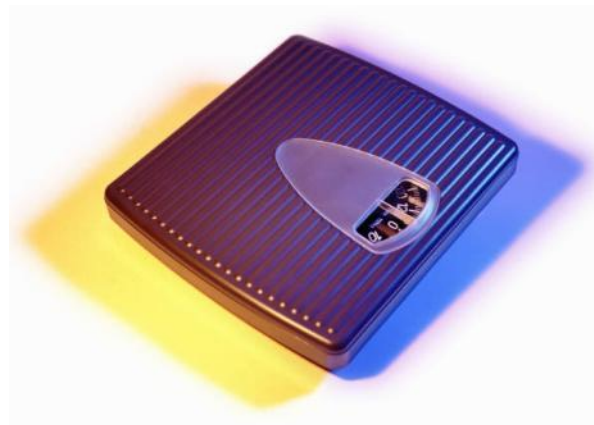
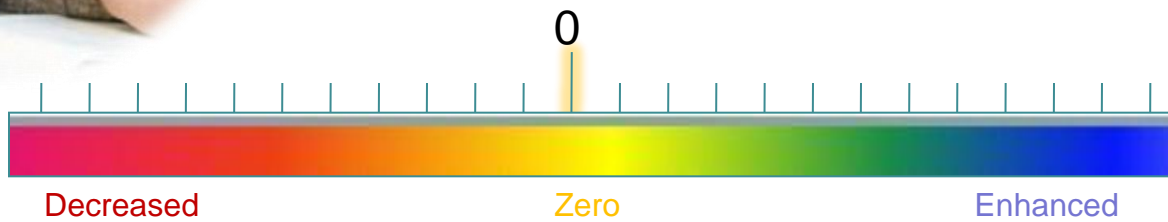


**Visible Learning,  
Visible Leadership**  
The Mindsets  
that make the difference  
in Education

**John Hattie**  
**Visible Learning Laboratories**  
**University of Auckland**



# Influences on Achievement ?

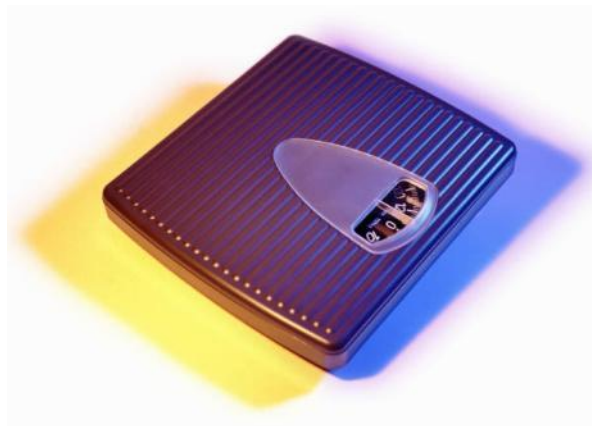
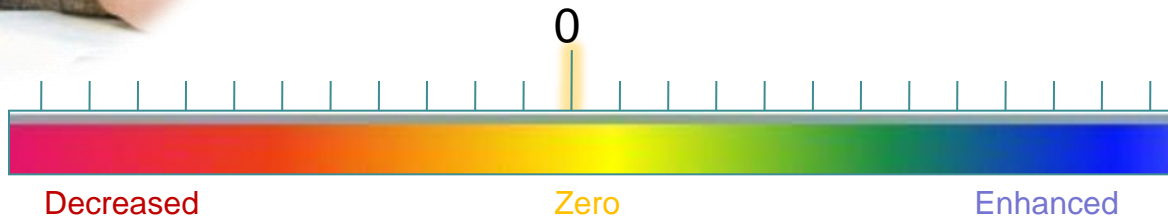


# Reducing Class Size on Achievement?



**What is the effect of reducing class size**

**Hundreds of evaluations of reducing class size ....**



# Effect on Achievement over time?



Reducing  
Class Size



0 .20

1.0



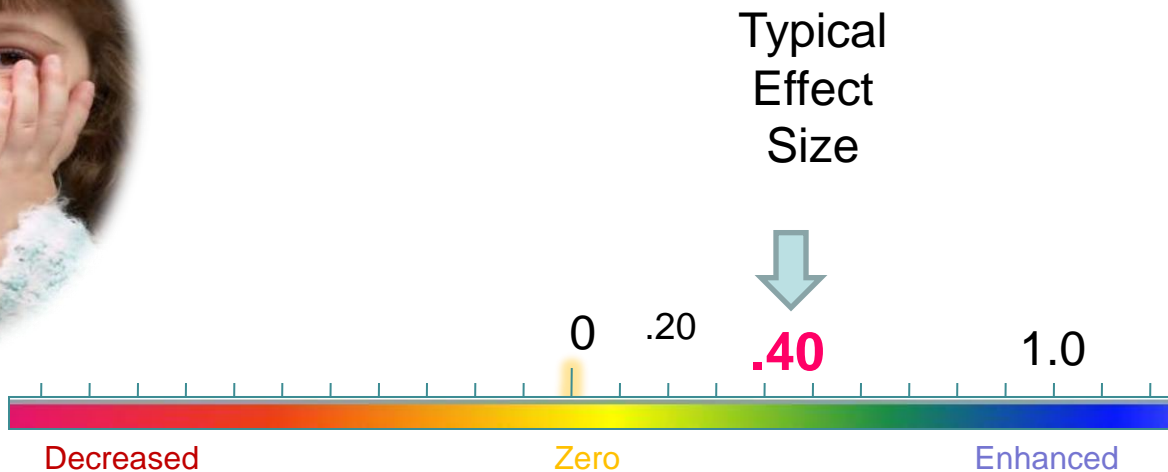
An effect-size of	.20	1.0
advancing achievement	9 mths	3 yrs
% improving rate of learning	10%	45%
r variable & achievement	.10	.45
% of students with treatment exceeding those not treated	8	34

# The typical influence on achievement

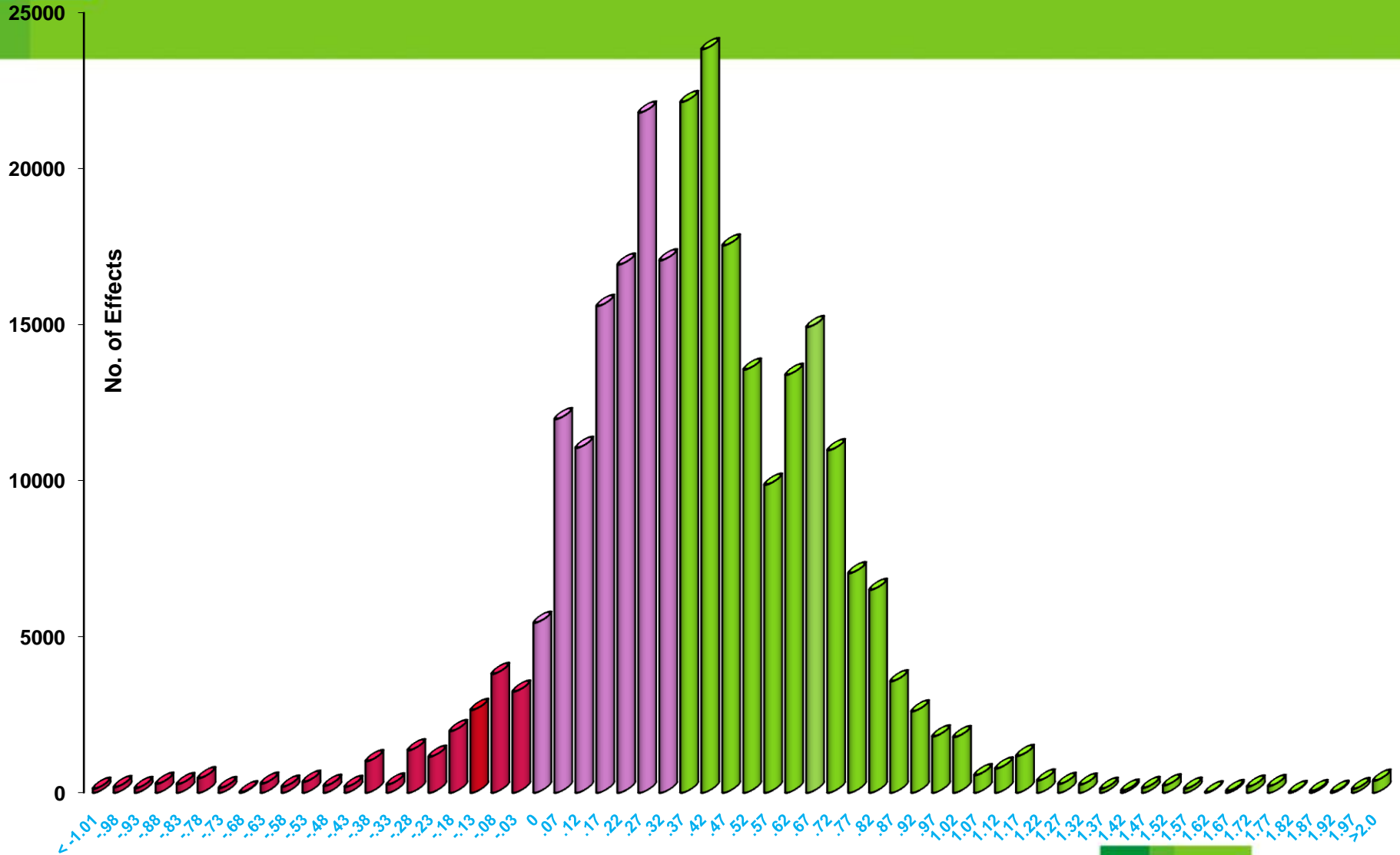
**So what is the typical effect across**

- **800+ meta-analysis**
- **50,000 studies, and**
- **200+ million students**

# Effect on Achievement over time?



# Distribution of effects



# Rank these 12 effects: Answers

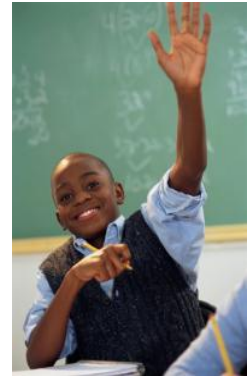
- 1 Acceleration (speed up a year)
- 2 Feedback
- 3 Student-teacher relationships
- 4 Teaching study skills
- 5 Reading Recovery
- 6 Cooperative learning
- 7 Homework
- 8 Individualized instruction
- 9 Ability grouping
- 10 Open vs. traditional classes
- 11 Retention (hold back a year)
- 12 Shifting schools





# Rank these 12 effects: Answers

1	Acceleration (speed up a year)	.88
2	Feedback	.73
3	Student-teacher relationships	.72
4	Teaching study skills	.59
5	Reading Recovery	.50
6	Cooperative learning	.41
7	Homework	.29
8	Individualized instruction	.22
9	Ability grouping	.12
10	Open vs. traditional classes	.01
11	Retention (hold back a year)	-.16
12	Shifting schools	-.34



# The Disasters ...



Rank	Influence	Studies	Effects	ES
130	College halls of residence	10	23	.05
131	Multi-grade/age classes	94	72	.04
132	Student control over learning	65	38	.04
133	Open vs. Traditional	315	333	.01
134	Summer vacation	39	62	-.09
135	On Welfare Policies	8	8	-.12
136	Retention	207	2675	-.16
137	Television	37	540	-.18
138	Mobility	181	540	-.34

# The Disasters ...



Rank	Influence	Studies	Effects	ES
120	<b>Mentoring</b>	74	74	<b>.15</b>
121	<b>Teacher education</b>	85	391	<b>.12</b>
122	<b>Ability grouping</b>	500	1369	<b>.12</b>
123	<b>Gender</b>	2926	6051	<b>.12</b>
124	<b>Diet</b>	23	125	<b>.12</b>
125	<b>Teacher subject matter knowledge</b>	92	424	<b>.09</b>
126	<b>Distance Education</b>	839	1643	<b>.09</b>
127	<b>Out of school curricula experiences</b>	52	50	<b>.09</b>
128	<b>Perceptual-Motor programs</b>	180	637	<b>.08</b>
129	<b>Whole language</b>	64	197	<b>.06</b>

# The Disasters ...



Rank	Influence	Studies	Effects	ES
110	Learning hierarchies	24	24	.19
111	Co- Team teaching	136	47	.19
112	Web based learning	45.3	136	.18
113	Family structure	845	1733	.17
114	Extra-curricula Programs	102	68	.17
115	Teacher Immediacy	16	16	.16
116	Within class grouping	129	181	.16
116	Home-school programs	14	14	.16
118	Problem based learning	285	546	.15
119	Sentence Combining programs	35	40	.15

# Not Worth it yet ...



Rank	Influence	Studies	Effects	ES
100	Finances	189	681	.23
101	Illness (Lack of)	13	13	.23
101	Religious Schools	71	71	.23
103	Individualized instruction	638	1185	.22
104	Visual/Audio-visual methods	359	231	.22
105	Comprehensive Teaching Reforms	282	1818	.22
106	Class size	96	785	.21
107	Charter Schools	18	18	.20
108	Aptitude/treatment interactions	61	340	.19
109	Personality	234	1481	.19

# Typical “average teacher” territory ...



Rank	Influence	Studies	Effects	ES
90	Exercise/Relaxation programs	227	1971	.28
91	Desegregation	335	723	.28
92	Mainstreaming	150	370	.28
93	Teaching test taking & coaching	275	372	.27
94	Use of calculators	222	1083	.27
95	Values/Moral Education Programs	84	97	.24
96	Competitive vs. individualistic learning	831	203	.24
96	Special College Programs	108	108	.24
98	Programmed instruction	493	391	.23
99	Summer school	105	600	.23

# Typical “average teacher” territory ...



Rank	Influence	Studies	Effects	ES
80	Decreasing disruptive behavior	165	416	.34
81	Drugs	467	1839	.33
82	Simulations	361	482	.33
83	Inductive teaching	97	103	.33
84	Ethnicity	9	9	.32
85	Teacher effects	18	18	.32
86	Inquiry based teaching	205	420	.31
87	Ability grouping for gifted students	125	202	.30
88	Homework	161	295	.29
89	Home visiting	71	52	.29

# Closer to Average ...



Rank	Influence	Studies	Effects	ES
70	Time on Task	100	136	.38
71	Computer assisted instruction	4899	8914	.37
72	Adjunct aids	73	258	.37
73	Bilingual Programs	128	727	.37
74	Principals/ School leaders	491	1257	.36
75	Attitude to Mathematics/Science	288	664	.36
76	Exposure to Reading	114	293	.36
77	Drama/Arts Programs	715	728	.35
78	Creativity	21	447	.35
79	Frequent/ Effects of testing	569	1749	.34



# Average



Rank	Influence	Studies	Effects	ES
60	Mathematics programs	706	2404	.43
61	Behavioral organizers/Adjunct questions	577	1933	.41
63	Cooperative learning	306	829	.41
64	Science	884	2592	.40
65	Social skills programs	540	2278	.40
66	Reducing anxiety	121	1097	.40
67	Integrated Curricula Programs	61	80	.39
68	Enrichment	214	543	.39
69	Career Interventions	143	243	.38

# Average



Rank	Influence	Studies	Effects	ES
51	Motivation	327	979	.48
52	Early Intervention	1704	9369	.47
53	Questioning	211	271	.46
54	Pre school programs	358	1822	.45
55	Quality of Teaching	141	195	.44
56	Writing Programs	262	341	.44
57	Expectations	674	784	.43
58	School size	21	120	.43
59	Self-concept	324	2113	.43

# Let's have them ....



Rank	Influence	Studies	Effects	ES
40	Keller's PIS	263	162	.53
41	Peer influences	12	122	.53
42	Classroom management	100	5	.52
43	Outdoor/ Adventure Programs	187	429	.52
44	Interactive video methods	441	3930	.52
45	Parental Involvement	716	1783	.51
46	Play Programs	70	70	.50
47	Second/Third chance programs	52	1395	.50
48	Small group learning	78	155	.49
49	Concentration/Persistence/ Engagement	146	587	.48

# Exciting ....



Rank	Influence	Studies	Effects	ES
30	Worked examples	62	151	.57
31	Home environment	35	109	.57
32	Socioeconomic status	499	957	.57
33	Concept mapping	287	332	.57
34	Challenging Goals	604	820	.56
35	Visual-Perception programs	683	5035	.55
36	Peer tutoring	767	1200	.55
37	Cooperative vs. competitive learning	1024	933	.54
38	Pre-term birth weight	46	136	.54
39	Classroom cohesion	88	841	.53

# Among the Winners ...



Rank	Influence	Studies	Effects	ES
20	Problem solving teaching	221	719	.61
21	Not labeling students	79	79	.61
22	Teaching strategies	5667	13572	.60
23	Cooperative vs. individualistic learning	774	284	.59
24	Study skills	668	2217	.59
25	Direct Instruction	304	597	.59
26	Tactile stimulation programs	19	103	.58
27	Phonics instruction	447	5990	.58
28	Comprehension programs	415	2653	.58
29	Mastery learning	377	296	.58

# The Winners ...



Rank	Influence	Studies	Effects	ES
11	Teacher-Student relationships	229	1450	.72
12	Spaced vs. Mass Practice	63	112	.71
13	Meta-cognitive strategies	63	143	.69
14	Prior achievement	3607	9209	.67
15	Vocabulary programs	301	800	.67
16	Repeated Reading programs	54	156	.67
17	Creativity Programs	685	837	.65
18	Self-verbalization & Self-questioning	113	1150	.64
19	Professional development	537	1884	.62

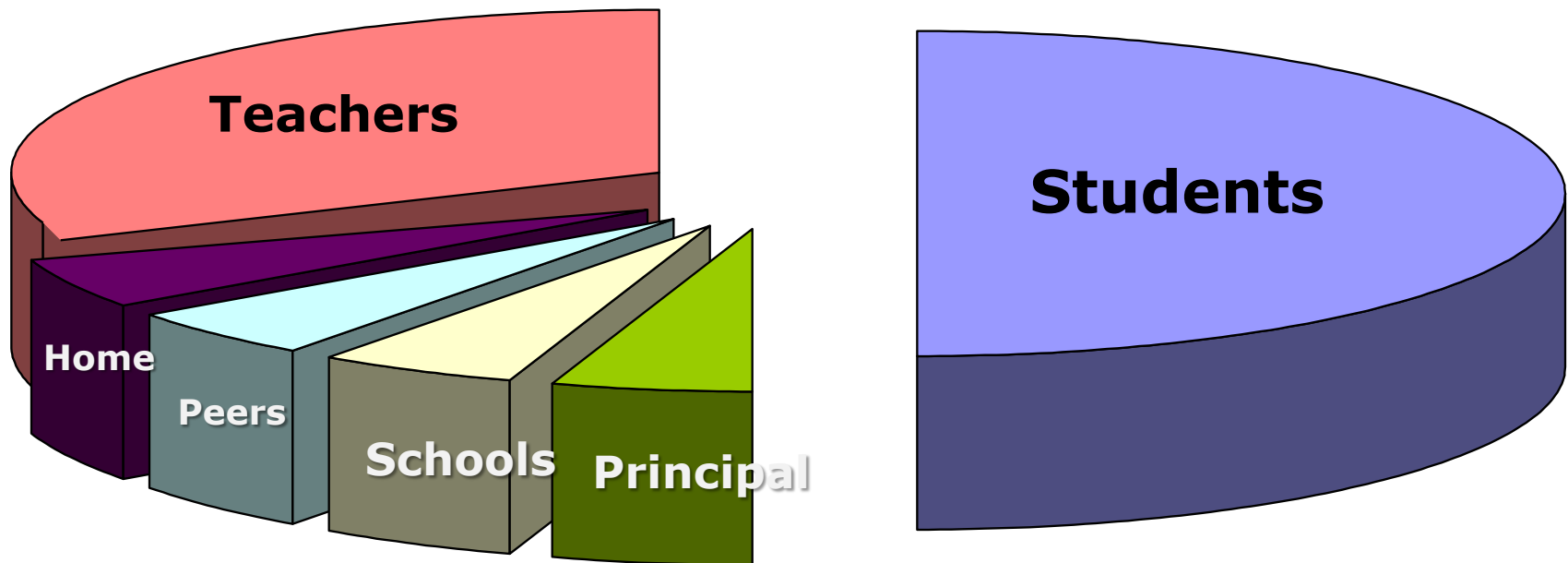
# The Winners ...



Rank	Influence	Studies	Effects	ES
1	Self-reported grades	209	305	1.44
2	Piagetian programs	51	65	1.28
3	Providing formative evaluation	30	78	.90
4	Micro teaching	402	439	.88
5	Acceleration	37	24	.88
6	Classroom behavioral	160	942	.80
7	Comprehensive interventions for learning disabled students	343	2654	.77
8	Teacher clarity	na	na	.75
9	Reciprocal teaching	38	53	.74
10	Feedback	1287	2050	.73

# Identifying what matters

## Percentage of Achievement Variance





# Visible Teaching – Visible Learning



When teachers SEE learning through the eyes of the student

and

When students SEE themselves as their own teachers



# MINDSETS – 1. Teachers/ Leaders as Evaluators

## A disposition to asking ...

- How do I know this is working?
- How can I compare 'this' with 'that'?
- What is the merit and worth of this influence on learning?
- What is the magnitude of the effect?
- What evidence would convince you that you are wrong?
- Where is the evidence that shows this is superior to other programs?
- Where have you seen this practice installed so that it produces effective results?
- Do I share a common conception of progress?

## 2. It's about the teacher's/leaders mindset, not the kids!



Don't blame the kids

Social class/ prior achievement is surmountable

All students can be challenged

Strategies not styles

Develop high student expectations

Enhance help seeking

Develop assessment capable students

The power of developing peer interactions

The power of critique/error/feedback

Self-regulations and seeing students as teachers



# 3. Teachers/Leaders as change agents

Achievement is changeable and enhanceable vs. immutable and fixed

Teaching as an enabler not a barrier

**Engage** in the total learning and  
not break into steps and chunks

The Power of learning intentions

The Power of success criteria



# The Contrasts

- An active teacher, passionate for their subject and for learning, a change agent

OR

- A facilitative, inquiry or discovery based provider of engaging activities



# Activator or Facilitator ?



## *An Activator*

Reciprocal teaching

Feedback

Teaching students self-verbalization

Meta-cognition strategies

Direct Instruction

Mastery learning

Goals - challenging

Frequent/ Effects of testing

Behavioral organizers

## *A Facilitator*

Simulations and gaming

Inquiry based teaching

Smaller class sizes

Individualized instruction

Problem-based learning

Different teaching for boys & girls

Web-based learning

Whole Language Reading

Inductive teaching

# Activator or Facilitator ?

## *An Activator*

Reciprocal teaching	.74
Feedback	.72
Teaching students self-verbalization	.67
Meta-cognition strategies	.67
Direct Instruction	.59
Mastery learning	.57
Goals - challenging	.56
Frequent/ Effects of testing	.46
Behavioral organizers	.41

***ACTIVATOR*** ***.60***

## *A Facilitator*

Simulations and gaming	.32
Inquiry based teaching	.31
Smaller class sizes	.21
Individualized instruction	.20
Problem-based learning	.15
Different teaching for boys & girls	.12
Web-based learning	.09
Whole Language Reading	.06
Inductive teaching	.06

***FACILITATOR*** ***.17***

# 4. Teachers/Leaders gaining feedback about themselves ...

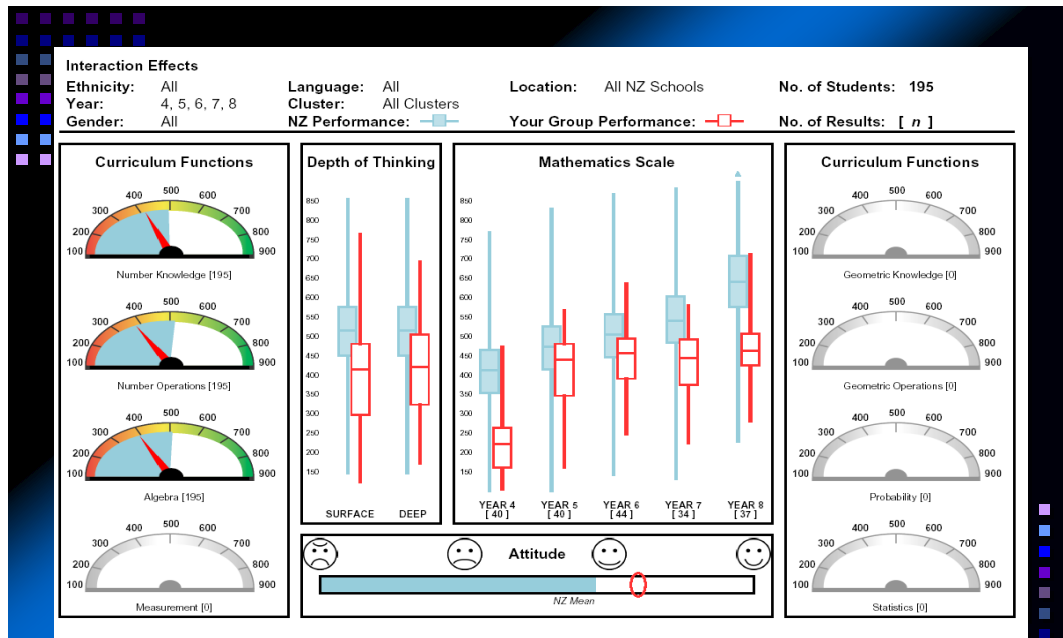
- Where am I going?
- How am I going?
- Where to next?





# 5. Assessment as feedback – to teachers/leaders

- Who did you teach well, who not so well
- What did you teach well, not so well
- Where are the gaps, strengths, achieved, to be achieved
- Levels and Progress
- Developing a common conception of progress



# Individual Learning Pathways

**Learning Pathways Report for Test:** Reading U, C, SF

**Group:** All Test Candidates

**Date Tested:** 22 October 2003

**Student:** Davis Crispness

## Correct

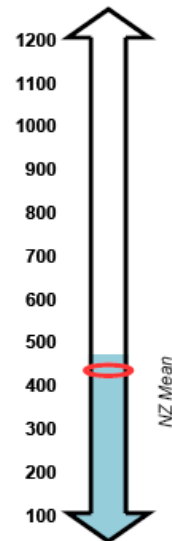
### Strengths

- Make inferences: (15, 22, 33)
- Knowledge of vocabulary: (11, 20, 24, 28, 33)
- Respond using understandings & information: (11, 25)
- Skim/scan for information: (19, 25)
- Find, select, & retrieve information: (19, 25)
- Punctuation: (15, 24)
- Make links between aspects of text: (15)
- Make use of prior knowledge: (20)
- Identification and understanding of main ideas: (20)

### Achieved

- Respond using understandings & information: (2, 6, 13, 21)
- Skim/scan for information: (2, 21)
- Find, select, & retrieve information: (2, 21)
- Knowledge of vocabulary: (6)
- Knowledge of semantic, syntactic, & visual grapho-phonetic cues: (6)
- Identification and understanding of main ideas: (13)
- Understand & organise or sequence material: (2)

## aRs Score



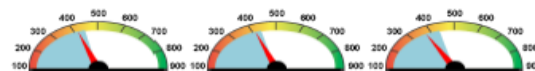
## Incorrect

### To Be Achieved

- Make links between verbal & visual information: (4, 5, 18)
- Respond using understandings & information: (10, 18, 23, 26, 29)
- Knowledge of poetic & figurative language: (10)
- Knowledge of vocabulary: (5, 7, 10, 31)
- Use grammatically correct structures: (7)
- Knowledge of semantic, syntactic, & visual grapho-phonetic cues: (7)
- Make use of prior knowledge: (26)
- Knowledge of publishing/text conventions (e.g., Index, Contents): (26)
- Make links between aspects of text: (27, 29, 32)

### Gaps

- Respond using understandings & information: (1, 8, 9, 12, 16)
- Identification and understanding of main ideas: (1)
- Find, select, & retrieve information: (1, 3, 16, 17)
- Use grammatically correct structures: (8, 9)
- Knowledge of semantic, syntactic, & visual grapho-phonetic cues: (8)
- Knowledge of vocabulary: (8, 9)
- Understand & organise or sequence material: (3)
- Make inferences: (12)
- Make links between verbal & visual information: (12)



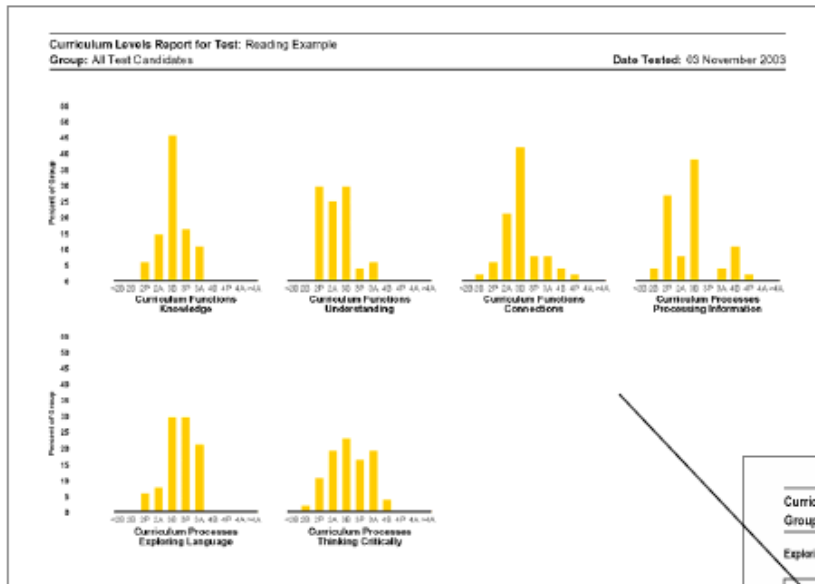
	aRs	Surface	Deep	Understanding	Connections	Grammar
<b>This student</b>	430	466	408	419	414	379
<b>Level</b>	2P	2A	2P	2P	2P	2P
<b>Year 5 mean</b>	462	464	446	448	438	440

**This student**  
**Level**  
**Year 5 mean**

# Curriculum Level Report

e-asTTle

Curriculum Levels Report



This report is designed to answer the question “Where are students relative to the targets of Curriculum Levels 2 to 6”?

This report enables teachers to monitor the effect of teaching and learning activities on student progress within levels.

Curriculum Levels Report for Test: Reading Example  
Group: All Test Candidates Date Tested: 03 November 2003

Exploring Language (Click to Return to Graphs)

<2	2	3	4
		Ross Fraser Elora Kase Pavla Loggins	Ben Mizzan Geop Mearns Steven Pat Catherine Tackwell
5	6	7A	
Hannah August Chloe Spangher-Babbiker Eve Dean Terry East Doris Crigmore Drewson Gann Karon Lohar Fred Cox Stake-Pole-Atop Karl Doh Helen Squire Bill Trueman Cathie Vohler Sue M'Intyre	Giggy Capper Tara Brinkley Adrian Flyer Mukhad Hodge Della Kocoussis Natalie Jewell Scottie Luffenberg-Gibson Brad Lane Jessica Mackay Chloe Mearns Natalie Peckard Libertina Pricious Pocanna Stand Della Trueman	Nora Goble Helen Poyner Angela Gail Mary Goble-Korobal Evelyn Harty Timothy Harty-Lump Matthew M'Intyre Gemma M'Intyre Wendy Searns Fusely Tackwell	
8	9	10A	10B

## 6. Challenge or “Do your best”



Maintain the challenge not break it down

Power of learning intentions

Power of success criteria

# 7. It's about “not knowing”/error Relationships in classrooms



**The importance of error  
and not knowing ...**

**Build trust and rapport**

**Student more than teacher questioning**

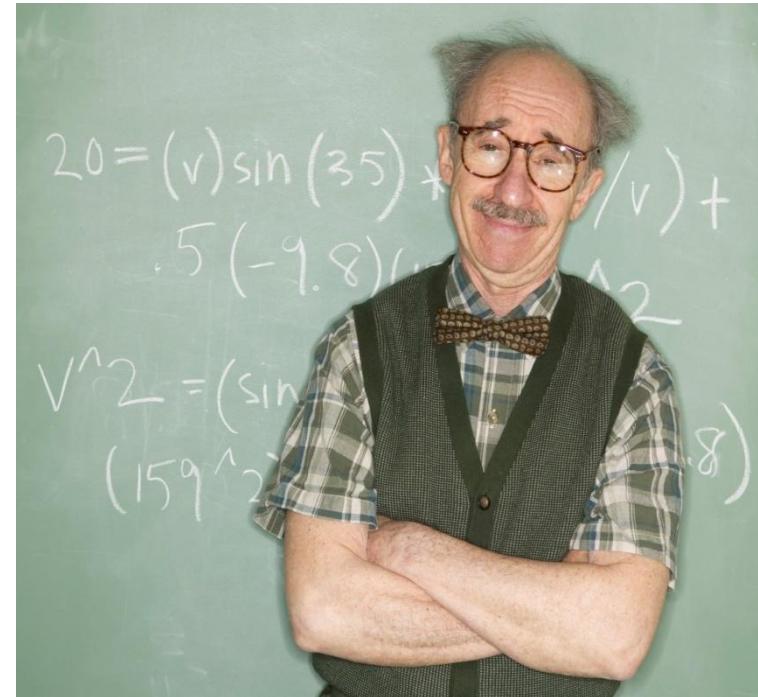
**Teacher clarity, support, and What's next**

**Peer teaching, assessment, learning**

**It's more about the learning than the teaching**

# What some teachers/leaders do!

- **Clear learning intentions**
- **Challenging success criteria**
- **Range of learning strategies**
- **Know when students are not progressing**
- **Providing feedback**
- **Visibly learns themselves**



# Such that students ...

- Understand learning intentions
- Are challenged by success criteria
- Develop a range of learning strategies
- Know when they are not progressing
- Seek feedback
- Visibly teach themselves



# VISIBLE LEARNING: A SYNTHESIS OF OVER 800 META-ANALYSES IN EDUCATION

VISIBLE LEARNING: A SYNTHESIS OF OVER 800  
META-ANALYSES IN EDUCATION

JOHN HATTIE



[j.hattie@auckland.ac.nz](mailto:j.hattie@auckland.ac.nz)

[www.education.auckland.ac.nz/staff/j.hattie/](http://www.education.auckland.ac.nz/staff/j.hattie/)

[www.visiblelearning.co.nz](http://www.visiblelearning.co.nz)

