"The Notable nine"

Ben Finch

The Facts -

In general:

- significant 'value loss' in several key areas regarding both literacy and numeracy

- We are struggling to extend our top-end students

- We aren't catering for the individual needs of our students

- Students don't seem to be intrinsically motivated to learn

So where to next?

- Focus on the learning, not the teaching - Instructional core

- Engage in research (evidence-based) - best practice
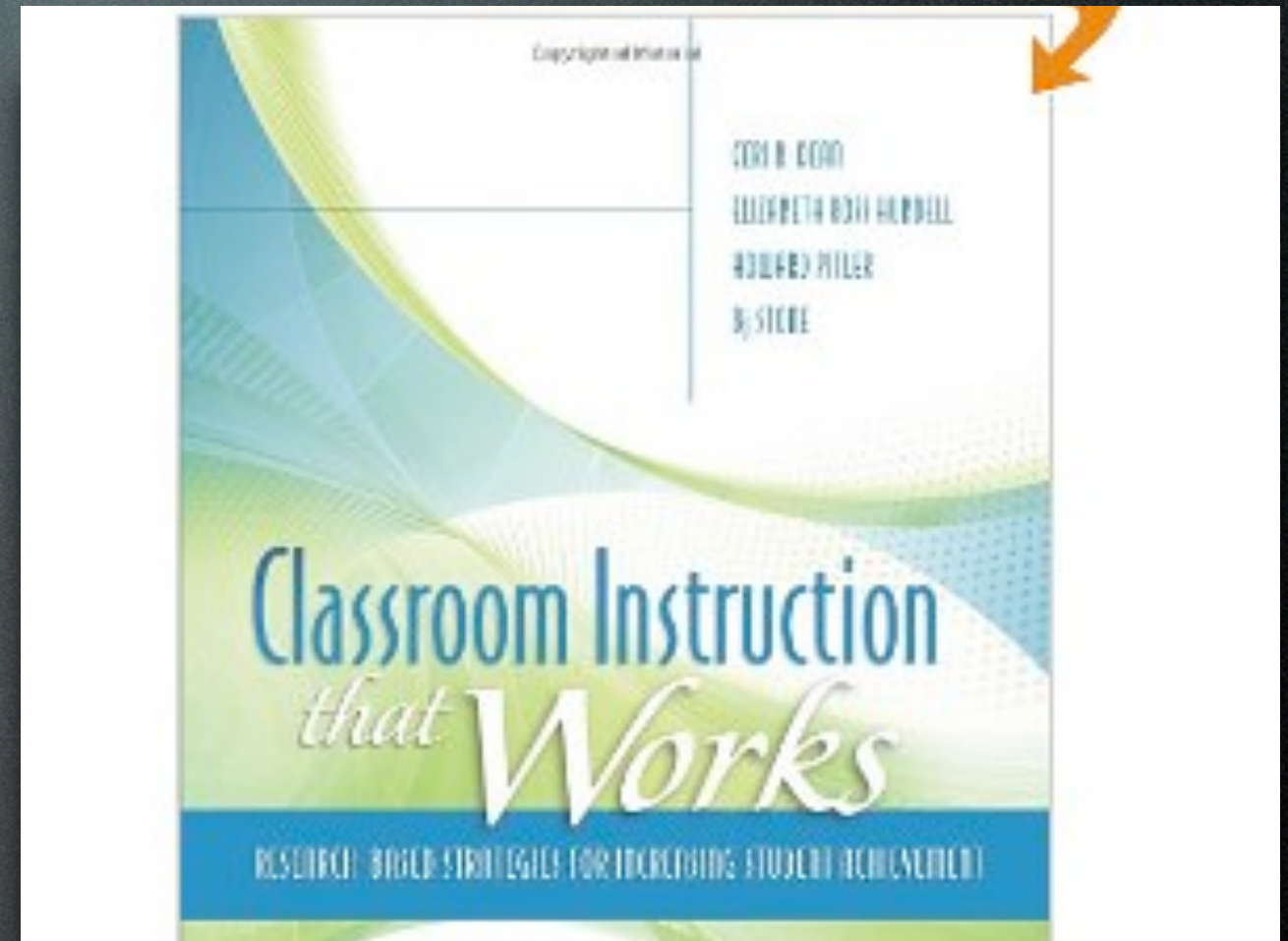
- Whole-school approach

Provides an updated estimate on each strategy's effect on student achievement.

Inspired by John Hattie's "visible learning",
Effect size 0.4 "Visible difference"
Effect size 1.0 "increase learning by 50%
Mobility -   -0.39
Television -   -0.14
Summer holidays -0.09

Classroom Instruction that Works

Best Bets!

"The Notable nine"

- Setting objectives and providing feedback

- Reinforcing effort and providing recognition

- Cooperative learning

- Cues, Questions and Advance organisers

- Nonlinguistic representations

- Summarising and note taking

- Assigning homework and providing practice

- Identifying similarities and differences

- Generating and testing hypotheses

Given our clientele

How could you ensure that 2 or more of these strategies are used in every classroom, every zone, every day?

1. Setting objectives (0.31)

*

"Goals, not content coverage or learning processes provide the rationale for curriculum and instruction" - Jere Brophy, Motivating students to learn

❖ Set learning objectives that are specific <u>not</u> restrictive

Learning Objectives	Learning Activity
by the end of the lesson you will be able to identify basic human body systems and their functions	Class Jigsaw
list and categorise countries in Asia according to climatic regions	Think/Pair/Share & Graffiti

❖ Communicate learning objectives to parents and students

❖ Connect the learning objectives to previous and future

Providing feedback (0.76) -

addresses what is correct and elaborates on what is needed next

❖ Timely to meet student needs - immediately for low level students

❖ Criterion referenced - rubric

❖ Engage students in this process (peer/ self assess). eg create a blog

| Learning Objectives	My feedback	Partner's feedback	Teacher's feedback
I will understand how the interaction of air masses create fronts as they move across oceans and land	When I look at my rubric I think I got a 2 because I'm not really clear yet about the difference.	You started out good but got got a bit confused in the middle. I would give you a 5	You earned a 3.5 on your rubric. Your explanation on how thunderstorms and tornados form was accurate, but your examples of tropical storms was inaccurate

2. Reinforcing effort (0.80) *

"successful students know that people, luck and ability are not dependable keys to success - effort is"

Effort Vs Scores

Student	Test score / 30	rating of effort /10
Atticus	13	5
Scout	26	9
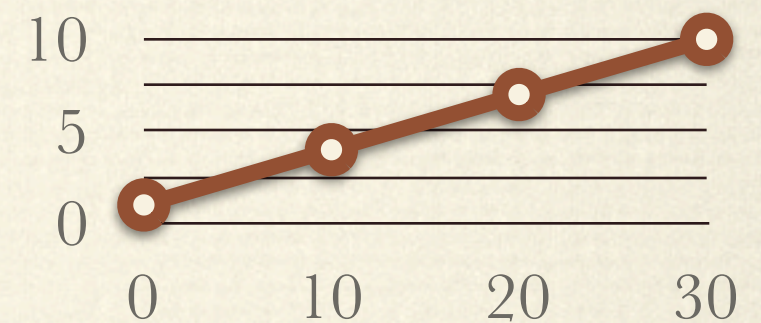
- ❖ explicitly teach students about the link between effort & achievement

- ❖ students to keep track of their own effort & achievement

Excellent	Good	Emerging	Unsatisfactory
I reread the text and compared it to my notes. I sought help and met with my study partner before the test	I reviewed my old work and made some new notes. I asked for some help if needed	I read my notes once	I didn't study at all last night

Providing recognition (0.80)

"Providing recognition must be done appropriately or it can have negative consequences" - Alderman, 2008

- ❖ Promote mastery-goal orientation - relative to achievement of goals rather than comparison to others (sense of control especially low-level students). pg 33

- ❖ Praise is specific and aligned with expectations

- ❖ symbols of recognition - progress of learning <u>not</u> completion of work

"Students may reject praise if it is delivered in the presence of peers or it is overused" - Hattie & Timperley, 2007

3. Cooperative learning (0.73) - helps teachers lay the foundation for success in a world that depends on collaboration and cooperation

*

- Emphasise positive interdependence and individual accountability

- Keep group sizes small (between 3 and 5)

- Use consistently but balance with sufficient opportunities to practice independently

"cooperative learning is a process. The teacher must teach the steps to the process, provide opportunities to practice those steps and clearly define the norms and parameters" - Tweed, 2009

4. Cues, Questions and Advance organisers (0.74) - *"Introduced before a lesson to draw attention to important points, identify relationships and relate prior knowledge" - Branford, Brown & Cocking, 2000*

*

- Ask <u>inferential</u> and <u>analytical</u> questions instead of questions that simply require recall.

Analysing errors	Constructing support	Other perspectives
How is this information misleading?	What is an argument that would support this claim?	Why would someone consider this to be evil?

- Advance organisers - are stories, pictures and other introductory material that set the stage for learning. (Expository, Narrative, Skimming & Graphic).

- Handy hint: narrative and graphic work every time!

5. Nonlinguistic representations (0.49) -

represent **knowledge as imagery** which allows us to experience emotions, sights, sounds, tastes and tactile experiences

*

- Use graphic organisers. eg. create a timeline using pictures

- making physical models

- generate mental pictures

- create illustrations or pictographs

- kinaesthetic activities

"helps to tap into the interests and emotions of our students, making points easier to understand"

Organise

6. Summarising and Note taking (1.00)

Capture

Reflect

"Involves higher-order thinking as students analyse and decide which information to keep, which to exclude and which to replace"

*

- Engage in reciprocal teaching (summariser, questioner, clarifier, predictor)

- Summary frames

- Use a variety of different types and allow time to revise notes

7. Assigning homework (0.13)

*

What learning will result from this homework assignment?

- Need to be careful with the design of homework that we set (not new) - reinforce misconceptions/ learn incorrectly

- better with corrective feedback that is immediate (comments NOT grades)

- develop whole-school homework policy

- design should communicate the purpose - to increase speed and accuracy <u>or</u> to prepare for new learning

- Provide only as needed

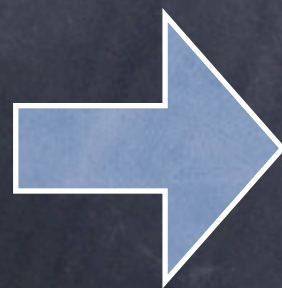Effectiveness of homework **Vs** Negative effects on home life
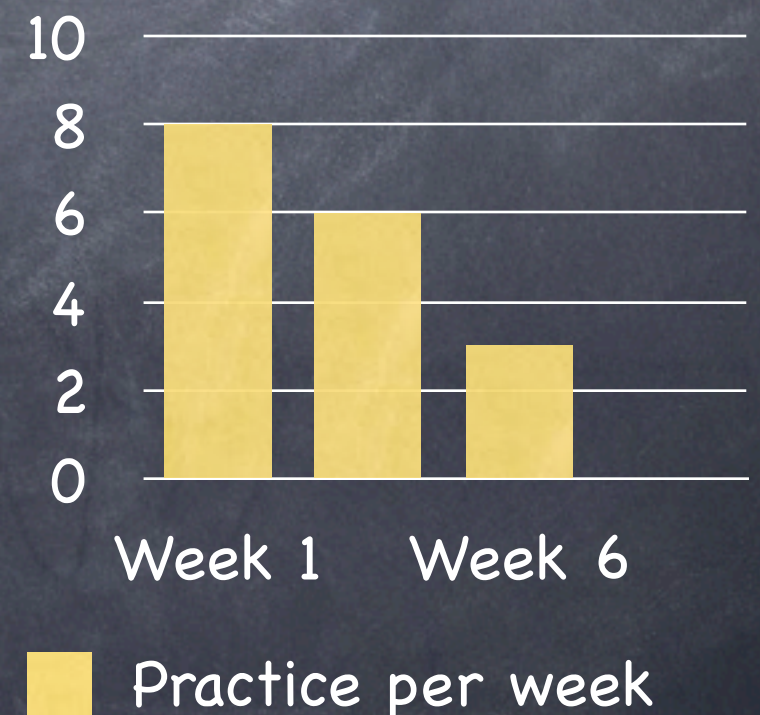
Providing practice (0.42)

"Students need to practice a skill at least 24 times before they reach 80% competency" - Anderson, 1995

- Communicate the purpose of practice

- Provide Feedback

- sessions are short, sharp and focused - more at the beginning of a unit

Check for understanding → Independent practice
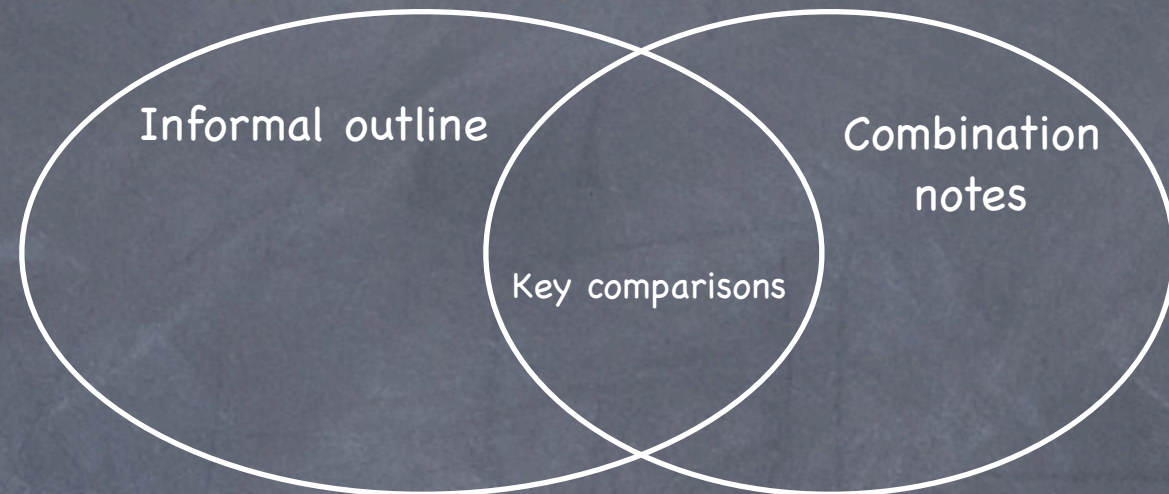

Practice per week

8. Similarities and Differences (0.66)

"Identifying similarities and differences helps learners gain insight, draw inferences, make generalisations and refine schemas" – Holyoak, 2005

Comparing
Classifying
Metaphors
Analogies

Informal outline

Combination notes

Key comparisons

- teach a variety of ways to identify similarities and differences

- teach explicitly and practice as they engage in identifying similarities and differences

- provide support cues to help students. eg. posters & diagrams

"When students are presented with appropriately arranged contrasts, they are likely to notice new features they hadn't noticed previously" – Bransford, 2000

*

9. Testing Hypotheses (0.58)

"If I had..."

"What we want students to be able to do is find issues that are important to them, gather necessary information from a wide variety of sources and to test them to the best of their ability"

Induction - 'reading between the lines' to figure things out

deduction - using general rules to make predictions about a future event or action

- Engage students in a variety of structured tasks for generating and testing hypotheses - mini lessons

- Ask them to explain their hypotheses

"what if..."

"What would happen..."

"we are preparing students for jobs that don't exist yet, which will use technologies that haven't been discovered yet, to solve problems we have not yet realised" - Fisch & McLeod

Every student,
Every classroom,
Every zone

From	To
A focus on getting through content/ doing the work to get a grade	**Explicitly teaching** a few things well that satisfy short-term goals
Students copying notes from the board and answering worksheets	Students working collaboratively to find the information themselves
Teacher-directed instruction	Teachers acting as a guide in the learning process
Providing homework each week because it's the right thing to do	Careful and thoughtful provision of homework
Lessons that involve lectures	Students that formulate and test their own hypotheses
Students that see learning as a chore	Making connections between learning and 'real-life' situations

Kaizen - "continuous improvement"

Insanity: "doing the same thing over and over again and expecting different results"
- Albert Einstein

References

Dean, C., Hubbell, E., Pitler, H., Stone, B. J (2012). Classroom instruction that works *Research-based strategies for increasing student achievement 2nd Ed.* Denver: CO

Hattie, J.A.C. (2009). Visible learning: *A synthesis of over 800 meta-analyses relating to achievement.* New York: Routledge