The Goldilocks Map by Andrew Watson

Planning Summary by Helen Reynolds @itsalearningcurve.education

Content	Do This/Remember This
Introduction: Teachers increasingly using psychology/neuroscience research, which can be baffling/ conflicting, this book will help you decide if the 'research-informed teaching strategy' (a Big Ask BA) is genuine, beware when 'research shows…' is added, look for boundary conditions, in this book are a) a process anyone can use (no stats needed) and b) clear and useful info to help sort genuine from fakes, peer review flawed bunt as good as it gets. You'll have skills to know when your 'quest' has ended (it's fake/not useful to YOU)	• Check out TILT: https://tinyurl.com/49p4x72n • Be skeptical • Be alert to 'research shows' or 'brain science means'
Part I: The Questing Equilibrium: 1. Introducing Goldilocks: right perspective = openness to ideas + right balance of respect for expertise, two extremes – can't tell me what to do/jumping on every new fad, middle ground = excited at prospect + wary of exaggeration, Goldilocks = openness equilibrium, people with little expertise predict higher achievement [Kruger & Dunning, 1999], this can happen when research makes a BA, we overestimate knowledge of the brain, underestimate teaching expertise, use expertise to adopt/reject/adapt/blend/tweak/reschedule/fiddle.	• Watch for either of the extreme reactions to new ideas • Aim for 'Just Right' • Beware Dunning-Kruger effect • Beware 'always/never'* • Use expertise to good effect
Part II: Reliable Sources: 2. Facing the Chasm of Self-Doubt: When new idea arrives can be tempting to investigate the messenger (e.g. their status/qualifications) instead overcome self-doubt (I don't know enough) and ask the source a) what's the best research you know of that supports this? (wrong/incomplete = can't/won't say, read this book, intricate brain anatomy) b) has this been tried with students in a classroom (wrong /incomplete = not acknowledging neuroscience isn't psychology & rarely provides classroom guidance, won't share science) – wrong = END quest	• Ask questions for right answers: Here's the study (ies)! • Watch for evasion, dismissiveness • Follow up incomplete answers and DON'T follow unreliable guides –
3. Digging for Buried Treasure: Now we have the best evidence we can look for the paper on Google Scholar, check the journal's 'About' page for info about peer review, if not there then email author or look on their site, or email blogger, dismiss any Word docs on the internet/non peer-reviewed paper – if peer-reviewed paper is *not* there END quest	• https://scholar.google.com/ • Check paper has been peer-reviewed • Get copy of original paper
4: Breaking the Disguise Spell: ask 'does the research support the source's teaching advice?' 'does it say what the source says it does?', look at abstract (one paragraph summary) for an exact match, use 3 questions 'what did the researchers want to find out, what did they do, what did they conclude?' and see how it matches what the source said, some abstracts are easy to read, others need perseverance, if it doesn't match exactly END quest	• Look at abstract first – does it match claim? • Use the 3 questions • Look for omissions, exaggerations, extrapolations
Part III: Evaluating the Research: 5. Exploring the Boundaries: psychology research is a messy muddle, can produce contradictory advice because it's done with humans, boundary conditions link to where/how the research was done (Dylan Wiliam: everything works somewhere (probably) and nothing works everywhere (definitely), *exception = never change your teaching based on non-human subjects END quest	• Look for boundary conditions in terms of participants/subjects + teacher • Evaluate to see if it would work for your students
6. Cracking the Code: need to decipher 2 things: precisely what the participants did + the researchers' definition of benefit/success/improvement, abstract usually written in 'code' so look for methodology in Procedures, unpack jargon, 3 more questions – 'did researchers measure something meaningful + does their definition of success match my school's need + how long did benefits last?', may END quest	• Find out what the participants did • Be SUPER clear about definitions • Use 3 more questions to find out how they define 'it works'
7. Facing the Giant: 'does the research say what the *researcher* said it did?', ask 3 questions – 'does the control group inspire confidence + do the most important numbers add up + does a teacher's perspective add additional/contradictory interpretations?', ways the control group don't match introduce confounding variables, care with 'business as usual' as having something done IS an intervention by itself, check results tables for significance, graphs/charts for y-axis, remember psychology researcher perspective different to teacher perspective but may END quest	• Check details of the control group • Make sure not too many confounding variables • Don't read the results section – check summary tables and graphs • Ask if it makes sense as a teacher
Part IV: There and Back Again: 8. The Improvisational Quest: upend the goal (to be more confident) by trying to undermine our confidence in the strategy we were going to embrace, check online not just Google Scholar, look at researchers' own introduction or literature review for studies that had limited supporting evidence/contradictions, meta-analyses *should* show a dense web of support, however, some perfectly effective teaching strategies do not have research evidence to support them, BUT sometimes different fields produce converging evidence, if you can't find compelling research to **deter** you, that's GOLD.	• Use Google with skeptical research terms • Look for replication • Check out meta-analyses • Remember – you DON'T have to change anything – use your expertise
9. Epilogue: the Goldilocks Map is a model: all models are wrong, some models are useful	• Quest matters more than the map
Part V: Appendices and Beyond Appendix I: Statistics – Old Friends and New Cohen's d = $\frac{mean\ group\ 1 - mean\ group\ 2}{average\ standard\ deviation\ of\ both\ groups}$ Appendix II: Recycled Orbs – beware different groups, brain training, domain general strategies, brand names are presented with no evidence Appendix III: Study Overview A paper = Title and authors, Abstract, Introduction, Study, Participants, Procedures, Results, Discussion, Limitations Appendix IV: The Back of the Book – commonly asked about areas: neuroscience and teen brains, notetaking by hand/laptops, music and learning, effect of final exams	• Use Cohen's d, not p-values, or n • Small is 0.2, medium, 0.5, large 0.8 • Beware shiny ideas (orbs) that recycle • Learn to skim papers strategically • Beware confirmation bias, the Halo Effect and many more…!