

RHC Handout: Practical paediatrics PD, Guy Logan

Game -What is Learning?

Rally Table: Part 1 -

Get into groups of 4 and number yourselves 1, 2, 3 & 4

Odds (1s & 3s); define 'learning' using AS MANY of these words as possible.

Evens (2s & 4s), define 'learning' using NONE of the above words.

Don't confer please.

Rally Table: Part 2

Odds defined 'learning' using as many of these words as possible.

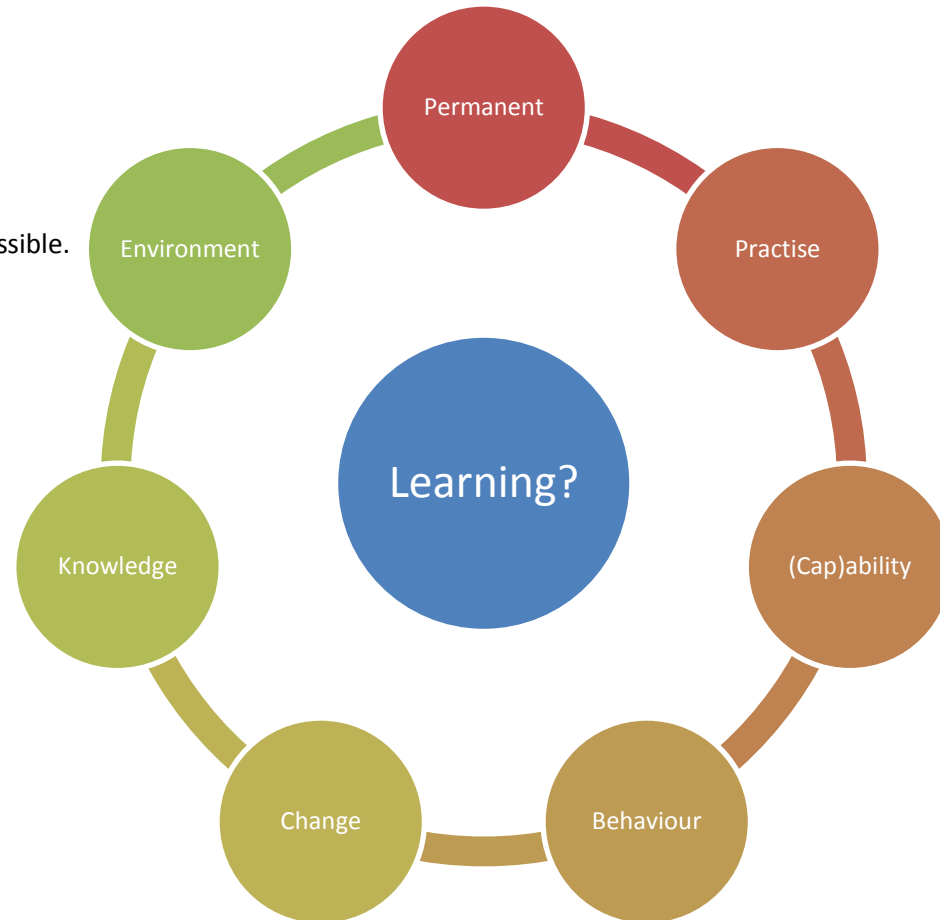
Evens, defined 'learning' using NONE of the above words.

1s & 2s team up to share and build on each definition

3s & 4s team up to share and build on each definition

Rally table part 3

Two sets of partners (1s & 2s, + 3s & 4s) join together as a team of four and decide how you may wish to finalize the task.



Developing a well built, clinically relevant and answerable question whilst keeping the environment and stakeholders visible

Evidence based practice (EBP) has been a part of allied and health professional practice for over 20 years. They use the PICO template to “convert a gap in the knowledge an uncertainty into a focussed question” (Schlosser et al, 2006 p. 1)

Patient/Problem	Kindergarteners with articulation disorders
Intervention	Individual pull-out treatment
Comparison	Group pull-out treatment
Outcome	Ability to consistently produce /s/
Clinical Question:	Are kindergarteners with artic. disorders who receive individual pull-out treatment more or less likely to achieve production of consistent /s/s than kindergarteners with artic. disorders who received group pull-out treatment?

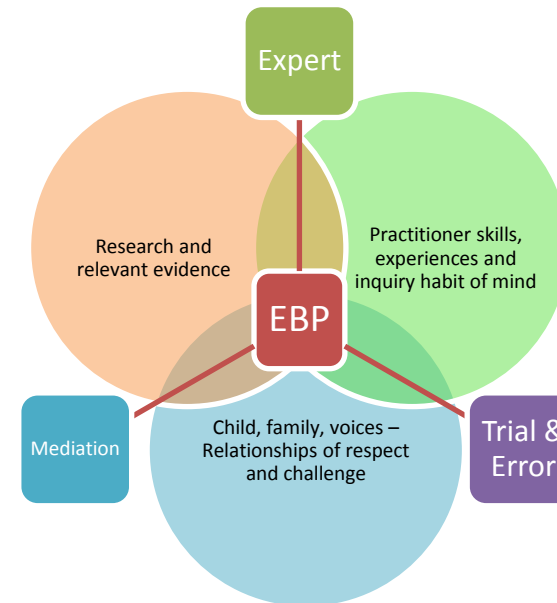
This model has been criticized for not transferring well to educational settings in two ways:

1. It does not explicitly value the interactions of other staff members or peers that may be critical to the question.
2. It does not provide space to take into account other ‘stakeholder perspectives’ beyond the ‘patient’ that may be significant in question development (see the blue circle in the combined model)

The PESICO Template

When exploring the field of intervention research the first thing to do is **define a clinical teaching question**. This is where PESICO comes in:

1. Read through the worked example below
2. Complete the formulation of the Clinical Teaching Question
3. Complete your PESICO and begin your search using the EBP links document, or your own method




Worked Example –Lost Messages

Person (Problem)	<p>A. Who is the person who is most directly affected by the decision? <i>Alex, a year 8 boy in mainstream secondary</i></p>
	<p>B. What is the problem to be solved? <i>Alex has SLC needs and is passive. He does not ask questions when he doesn't understand, he misses verbal and written information</i></p>
Environments	<p>Outline the learner's current/future environments and communication partner(s) knowledge, skills, and behaviours.</p> <ul style="list-style-type: none"> • Environment <i>Mainstream fee-paying catholic school in Melbourne –All boys.</i> • Communication Partner(s) <i>Integration aide (LSO), a safety figure for Alex</i> • Knowledge <i>Teachers lack understanding around SLCN and how/why to accommodate, LSO is aware of Alex's difficulties but lacks understanding beyond 'helping' him.</i> • Skills <i>LSO very nurturing, His science teacher is approachable and will used strategies suggested by the SLT/Psychs and Sp. Ed. teacher.</i> • Behaviours <i>Staff up-skilling desperately needed. There are low expectations on quiet conforming students to ask Qs etc: 'IKS'</i>
Stakeholders	<p>Describe stakeholders, including the person in P (and <i>their</i> perspectives about and attitudes towards the problem, intervention, or outcome), included directly or indirectly in the decisions.</p> <ul style="list-style-type: none"> • Person <i>Alex is passive, lacks confidence, doesn't want to stand out, lacks insight</i> • Parents <i>Supportive, open to new thinking, will follow-up, guilty of too much scaffolding in the past?</i> • Home community


	<p>Younger sibling with ID</p> <ul style="list-style-type: none"> • School community <p>Some peer support, Sp. Ed Dept. give support, 2SD \$?, has been offered pastoral support but not interested.</p>
I ntervention	<p>What are the proposed steps to change persons, interaction, events, procedures, and environments?</p> <p>Individual work with Sp. Ed. teacher to work on comprehension monitoring and repair via question asking. Alex demonstrates poor positioning, looking and thinking skills resulting in lost messages that remain lost. The intervention should teach Alex to:</p> <ol style="list-style-type: none"> 1. Identify if or why the <u>sound</u> of the message was difficult to follow –too loud, too quiet, interrupted, too fast etc. 2. Identify if or why the <u>information</u> in the message was difficult to follow –too much, unclear, impossible. 3. Identify if/why the <u>understanding</u> of the message was difficult to follow –The words were too long, unknown or the grammar was confusing. <p>The intervention should give Alex strategies for asking for repetition (sound) and/or explanation (information/understanding).</p>
C omparison	<p>Depict the comparison intervention/ exposure (if applicable) – could be an alternative intervention or a “do nothing” (baseline) condition. “Do Nothing” – Alex is dependent on the teacher’s prompts, which may or may not be forthcoming. Baseline data beyond observation to be collected.</p>
O utcomes	<p>Describe the desired outcomes</p> <ul style="list-style-type: none"> • Alex will be able to tell his Sp.Ed. Teacher or LSO when he knows a word and when he does not (self-assessment skills). • Alex will demonstrate increased meta-awareness/meta-cognition by being able to explain step-by-step, how he recognises when he does, or does not understand verbal information, and written information in class settings. • Alex will select a question to ask according to whether the <u>sound</u>, <u>information</u> or <u>understanding</u> was the cause of the ‘lost message’ and relay it to his LSO or preferred adult.
Clinical Teaching Question:	<p>Is a WHO? with WHAT? more likely to WHAT? and WHAT? in the WHERE? after receiving WHAT, WITH WHOM, WHEN & WHERE? when compared with WHOM?</p>

Guy's really useful sources for selecting evidence based practices (EBPs)


 US Sites	Who?	Evidence Validation?	Resources?
Allied Health Evidence http://alliedhealthevidence.com/	Physio, OT, Psychology and SLT populations	Secondary Evidence (High) Key Primary Research Controlled Trials Primary Research Ongoing Clinical Trials Patient Decision Aids	Possible too medical for ease of use for teachers. Useful multidisciplinary search
The American Speech-Language-Hearing Association (ASHA) Compendium http://www.asha.org/members/ebp/compendium	Children and young people that have speech, language, and communication needs (SLCN)	Use the AGREE II framework: Highly Recommended, Recommended with Provisos, or Not Recommended.	Full Clinical Practice Guidelines Tied to Systematic Reviews Blog Evidence Maps
Best Evidence Encyclopaedia (BEE) www.bestevidence.org	Early childhood–high school reading, Elementary–high school maths, English Language Learners, Technology in reading & maths	Strong evidence Moderate evidence Limited evidence (modest effects) Limited evidence (weak effects) No qualifying studies	Program description Contact information Website Research reports
Child Trends: What Works http://www.childtrends.org/what-works/	Children and adolescents	Social Interventions with significance at 0.5 from at least quasi-experimental studies.	Outcome-based fact sheets; Sexual health, Bullying, Health, Social-Emotional development, Language and literacy, inappropriate behaviour, Civic engagement, mental health
The Florida Center for Reading Research (FCRR) http://www.fcrr.org/	Pre-K -12 readers	Tier 3 reviews	Website has many broken links

Mathematica Education Research http://www.mathematica-mpr.com/our-focus-areas/education	Disability Early Childhood School age children Teachers Leadership	Various	Various publication and projects via consortia/topics
National Autism Center (NAC) www.nationalautismcenter.org	Individuals with Autism age 3-21	Established Emerging Unestablished Ineffective/harmful	Program description Treatment strategies when possible Research study citations
National Professional Development Center on Autism Spectrum Disorders (NPDC on ASD) http://autismpdc.fpg.unc.edu/evidence-based-practices	Individuals with Autism ages 3–21	Evidence-based practice (Odom’s hierarchy)	Program description Contact information Review websites Research citations Step-by-step instructions Implementation fidelity checklists Data tools
National Secondary Transition Technical Assistance Center (NSTTAC) www.nsttac.org	Secondary students Secondary transition Social skills Life skills Self-advocacy	Strong Moderate Potential (needs additional research)	Program description Contact information Website Research citations Extensive EBP Guide
Pearson EBP Briefs http://www.speechandlanguage.com/ebp-briefs	Children and adults with SLCN	Potentially Biased –Not free, pushes CELF-5 etc.	Free webinars and resources on EBP alongside paid content/briefs
Promising Practices Network http://www.promisingpractices.net/promising-practices.asp	All Children	Proven Programs Promising Programs Proven/Promising Programs Other Reviewed Programs	List of programs, Issue briefs Expert Perspectives Resources by topic

Social Programs That Work http://evidencebasedprograms.org/	Prenatal/Early Childhood K-12 Education Postsecondary Education Mental and Physical health	“Top Tier” Standard and “Near Top Tier” Standard	Short, plain language review and rank of effectiveness.
Texas Autism Resource Guide for Effective Teaching (TARGET) http://www.txautism.net/target-texas-autism-resource-guide-for-effective-teaching	K-Adult	Individual evidence collection recommended	Intervention Summary Table Research Summary Table Glossary, Evaluation, A-Z Interventions Useful videos of practice
TRIP https://www.tripdatabase.com/	Health/disability populations	Secondary Evidence (High) Key Primary Research Controlled Trials Primary Research Ongoing Clinical Trials Patient Decision Aids	PICO search is great
What Works Clearinghouse (WWC) http://ies.ed.gov/ncee/wwc/	Elementary–high school	Positive effects (++) Potentially positive effects (+) Mixed effects (+-) No discernible effects (0) Potentially negative effects (-) Negative effects (-)	Program description Contact information Website Research citations Cost
ERIC access to educational-related literature. www.eric.edu.gov			
Scopus multidisciplinary database covering published material in the humanities and medical sciences. www.scopus.com			

 UK Sites	Who?	Evidence Validation?	Resources?
The Campbell Collaboration http://www.campbellcollaboration.org/lib/?go=monograph	Everyone	Systematic Review	crime and justice, education , international development, and social welfare
The Communication Trust's What Works? http://www.thecommunicationtrust.org.uk/projects/what-works/whatworkssearch.aspx	Children and young people that have speech, language, and communication needs (SLCN)	Strong Moderate Indicative	Program description Contact information Website Research citations Cost
The Cochrane Database of Systematic Reviews http://www.cochrane.org/	Child Health Developmental, psychological & learning problems Mental health Neurology Alt. Medicine	Various: Cochrane Database of Systematic Reviews Trials Other review types	Review groups e.g.: DPLP Group ...And Methods studies, tech assessments, economic evaluations, journal club and podcasts
EPPI-Centre http://www.eppi.ioe.ac.uk/cms/	Child Health, Adult health, Education Research	Single studies to Systematic reviews	http://www.eppi.ioe.ac.uk/webdata/bases/Search.aspx Good Multiple Category search
Evidence4Impact http://www.evidence4impact.org.uk/	School Age Children	Star ratings: Strong, Moderate, Limited, No evidence, Not evaluated	Program description Contact information Website Research citations
Guidelines International Network –Library http://www.g-i-n.net/library/international-guidelines-library	All populations	Guidelines	Very useful search

<p>Oxford University systematic Review for EAL https://educationendowmentfoundation.org.uk/uploads/pdf/EAL_Systematic_review1.pdf</p>	<p>English as an additional language learners</p>	<p>Systematic Review; Overall strength of evidence rating: High Medium-High Medium, Low Effect Sizes listed</p>	<p>Intervention categories: Language Literacy CPD Family Literacy Effect Sizes and outcome measures analysed Implementation fidelity rated</p>
<p>Research Autism http://researchautism.net/autism-interventions</p>	<p>Learners with ASD</p>	<p>Very strong, positive evidence Strong, positive evidence Limited, positive evidence Insufficient/Mixed evidence No evidence Some negative evidence Strong negative evidence Very strong negative evidence Evidence of harmful effects <i>And A,B, C, D for Methodology</i></p>	<p>Very practical, useful for evaluating theory-to-practice</p>
<p>The Sutton Trust-EEF Teaching and Learning Toolkit www.educationendowmentfoundation.org.uk/toolkit</p>	<p>School age children</p>	<p>Effect size in months gained</p>	<p>Program description Contact information Website Research citations Cost</p>
<p>Investing in Children http://investinginchildren.eu/</p>	<p>School age children</p>	<p>Cost/benefit</p>	<p>Program description Benefits minus cost Benefit cost ration Return on investment Risk of loss</p>
<p>Centre for Reviews and Dissemination http://www.crd.york.ac.uk/CRDWeb/</p>			

 AUS/NZ Sites	Who?	Evidence Validation?	Resources?
ACER review on Literacy and Numeracy http://research.acer.edu.au/cgi/viewcontent.cgi?article=1019&context=policy_analysis_misc	Early Years –Yr12	Evaluation of Evidence in Lit Review format	Reviews of Australian Interventions particularly useful; Target group, focus and forms and assessments listed. 3 tier relevance explored
Australian Disability Clearinghouse http://www.adcet.edu.au/	Tertiary Students with a disability	Recourse based rather than evidence based	Useful resources for students and teachers
Kids Matter https://www.kidsmatter.edu.au/primary/resources-for-schools/other-resources/programs-guide/programs	Primary age children with mental health concerns	Use the KidsMatter risk/protective/ecological PPEI model. X-reference recommended	Culturally/linguistically diverse Lower SES, Rural Learning, intellectual and physical disability
Macquarie University MUSEC http://www.musec.mq.edu.au/community_outreach/musec_briefings/	Students with Special Educational needs	Use With Confidence Recommended Well worth a try Worth a try Use with caution Not proven Not Recommended	Fantastic resource used evidence to weigh the intervention in an accessible way
Mind Matters mental Health and wellbeing programmes http://mhws.agca.com.au/mmpipi_search.php	Young people in need of mental health and well-being support	Evidence of Effectiveness has been provided by the Project Supplier or from other third parties. Not independently verified. Matrix lists poor, adequate or excellent.	Programs Resources Internet Resources Program selection matrix

NSW Speech Pathology EBP http://nswspeechpathologyebp.com/	Paediatric speech & Language	RCTs	Good resources links and 'showcase'
University of Sydney & SPA http://speechbite.com/speechbite/search/articlesearch	Children and young people that have speech, language, and communication needs (SLCN)	Eligibility specified Random & Concealed allocation Baseline comparability Blind subjects, therapists & assessors Adequate follow-up Intention-to-treat analysis Between-group comparisons Point estimates and variability	Group Comparison Single Case designs Online training
UoS EBP Tutorial http://www.library.usyd.edu.au/skills/tutorials/medicine/ebmtut/index.html			
Mitchell's 27 strategies http://routledgetextbooks.com/textbooks/author/mitchell-9780415623230/students.php			
UoM Free resources http://unimelb.libguides.com/teacher_resources			
Raising Children Parenting Website http://raisingchildren.net.au/			

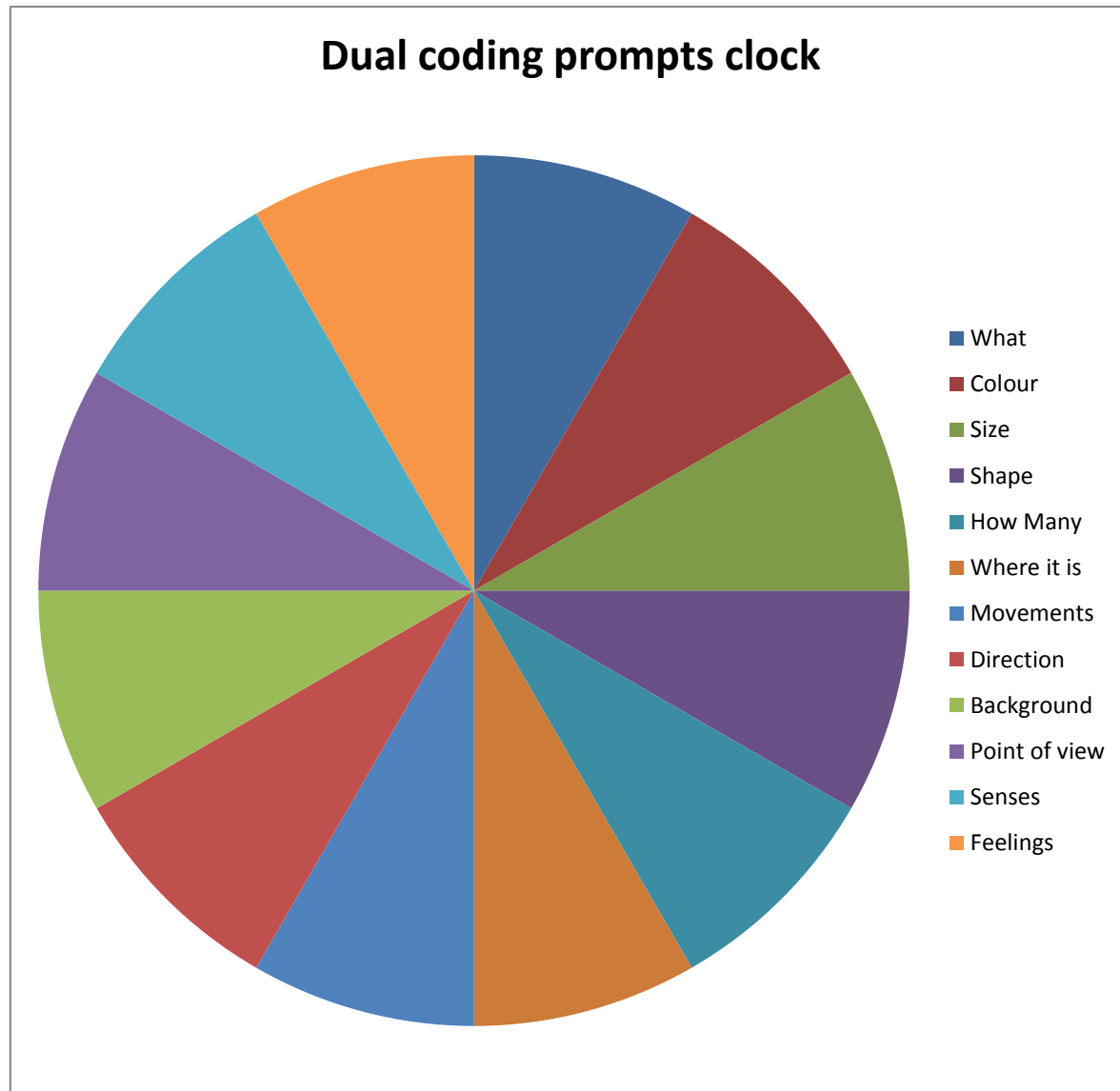
Your Turn...

Person (Problem)	A. Who is the person who is most directly affected by the decision?
	B. What is the problem to be solved?
Environments	Outline the learner's current/future environments and communication partner's knowledge, skills, and behaviours.
Stakeholders	Describe stakeholders , including the person in P (and <i>their</i> perspectives about and attitudes towards the problem, intervention, or outcome), included directly or indirectly in the decisions.

I ntervention	What are the proposed steps to change persons, interaction, events, procedures, and environments
C omparison	Depict the comparison intervention/ exposure (if applicable) – could be an alternative intervention or a “do nothing” (baseline) condition.
O utcomes	Describe the desired outcomes
<i>Clinical Teaching Question:</i>	
Commence Review!.... Key Terms:	

Supporting Cognition – promising practice: Dual Coding

- What do you **see** for...
- What do did **picture** for...
- Paraphrase the sentence,
 - Sentences,
 - Paragraph...
- Use your imagery to tell me the main idea?



Dynamic Assessment: Two Major Outcomes

Video Transcript

I think one important outcome of dynamic assessment is that we're able to distinguish between language disorder and language difference, and that's a huge issue, particularly with children from non-English backgrounds and for children who don't speak English as a primary language, because many standardized tests aren't going to give valid and reliable information about their abilities.

The other outcome of dynamic assessment-and this isn't something we're going to talk about as much today-is the emphasis on planning intervention. So looking at how the child responds to a mediated learning experience is going to help us make some real...realistic...develop some realistic expectations for what they're able to do in intervention and should help us to develop an intervention plan for a particular child.

So, in terms of looking at disorder versus difference, children who are able to make significant changes in the short-term mediated learning sessions are very likely to have language differences but not language disorders-maybe they weren't familiar with the test content, maybe they weren't sure how to perform on the test or what the expectations of the test were, but through some short-term intervention they're able to make some great strides in that-versus children who have a hard time making changes no matter what you do. So, children where you give them...you can give them the answer, and they still persist in giving you the wrong response, or you provide a lot of intense support, and they still have a very difficult time generalizing to a new task. Those are children who probably have a language impairment and not necessarily just a language difference.

Key References

<http://www.asha.org/practice/multicultural/issues/outcomes/>

- Ayres, P., & Sweller, J. (2005). The split-attention principle in multimedia learning. *The Cambridge handbook of multimedia learning*, 2, 135-146.
- Bourke, R., & Loveridge, J. (2013). A Scientist-practitioner Model for Inclusive Education: Supporting Graduate Students to Conduct Systematic Reviews for Evidence-based Practice. [Article]. *New Zealand Journal of Teachers' Work*, 10(1), 4-23.
- Boyd, R. (2008). Do people only use 10 percent of their brains. *Scientific American*.
- Nielsen, J. A., Zielinski, B. A., Ferguson, M. A., Lainhart, J. E., & Anderson, J. S. (2013). An evaluation of the left-brain vs. right-brain hypothesis with resting state functional connectivity magnetic resonance imaging. *PloS one*, 8(8), e71275.
- NRP, Health, N. I. o. C., & Development, H. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*: National Institute of Child Health and Human Development, National Institutes of Health.
- Paivio, A. (2009). Mind and Its Evolution: A Dual Coding Theoretical Approach. [Opinion]. *Psychological Record*, 59(2), 301.
- Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles concepts and evidence. *Psychological science in the public interest*, 9(3), 105-119.
- Sackett, D. L., Rosenberg, W. M., Gray, J., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. *BMJ: British Medical Journal*, 312(7023), 71.
- Schlosser, R. W., Koul, R., & Costello, J. (2006/01//2006 Duesseldorf). *Asking well-built questions for evidence-based practice*.
- Timperley, H. (2010). *Using evidence in the classroom for professional learning*. Paper presented at the Ontario Research Symposium.
- Torres, C., Farley, C. A., & Cook, B. G. (2014). A Special Educator's Guide to Successfully Implementing Evidence-Based Practices. [Article]. *Teaching Exceptional Children*, 47(2), 85-93. doi: 10.1177/0040059914553209
- Willingham, D. T. (2008). What is developmentally appropriate practice? *American Educator*, 32(2), 34.
- Wong, C., Odom, S., Hume, K., Cox, A., Fettig, A., Kucharczyk, S., & Schultz, T. (2014). Evidence-based practices for children, youth, and young adults with autism spectrum disorder. Chapel Hill, NC: University of North Carolina, Frank Porter Graham Child Development Institute, Autism Evidence Based Practice Review Group.