An illustration of practice-based research in the school board
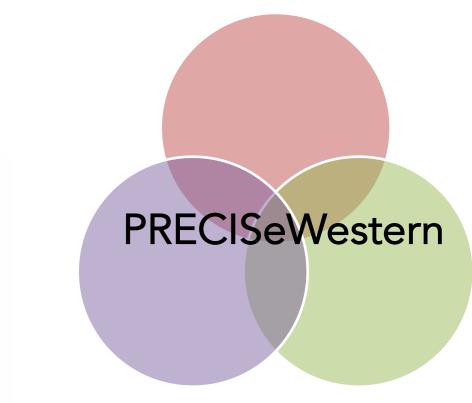
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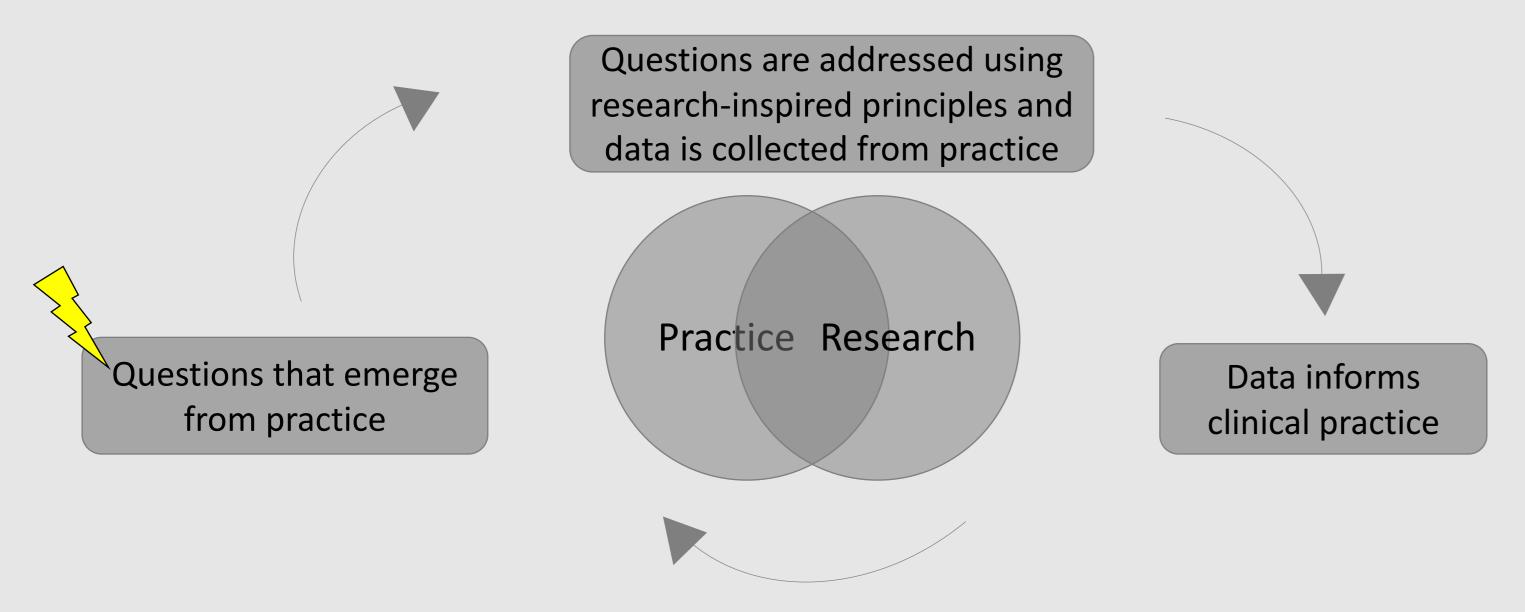2. The Durham District School Board
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Western UNIVERSITY · CANADA DDSB Ignite Learning PRECISeWestern bit.ly/LWMPubs

Practice-Based Research in Education ------------------------------

- Educational SLPs create early interventions to fit the service delivery model within their Board
- Service variations give rise to questions about effectiveness of early intervention design and delivery addressed via **practice-based research (PBR)**

> PBR is an **active** and **collaborative** approach[1] that creates knowledge at the point of implementation for clinicians to use in clinical settings.[2]
> This cycle eliminates the "research-practice gap"

Questions that emerge from practice → Questions are addressed using research-inspired principles and data is collected from practice → Data informs clinical practice

Practice Research

Western & DDSB Partnership Goal: Determine the validity of a kindergarten assessment tool
- Assessment tool designed by the SLPs: 20 minutes to administer, few materials, content specific
- Assesses phonological awareness, and narrative and personal retell

Methods--

Preliminary Discussion: Creating collaborative clinical-research questions
- Does the board-designed assessment tool identify children who need support? (Phase 1)
- Does the tool capture growth in skills across the school year? (Phase 1)
- Is this tool a valid measure of phonological awareness and narrative skill? (Phase 2)

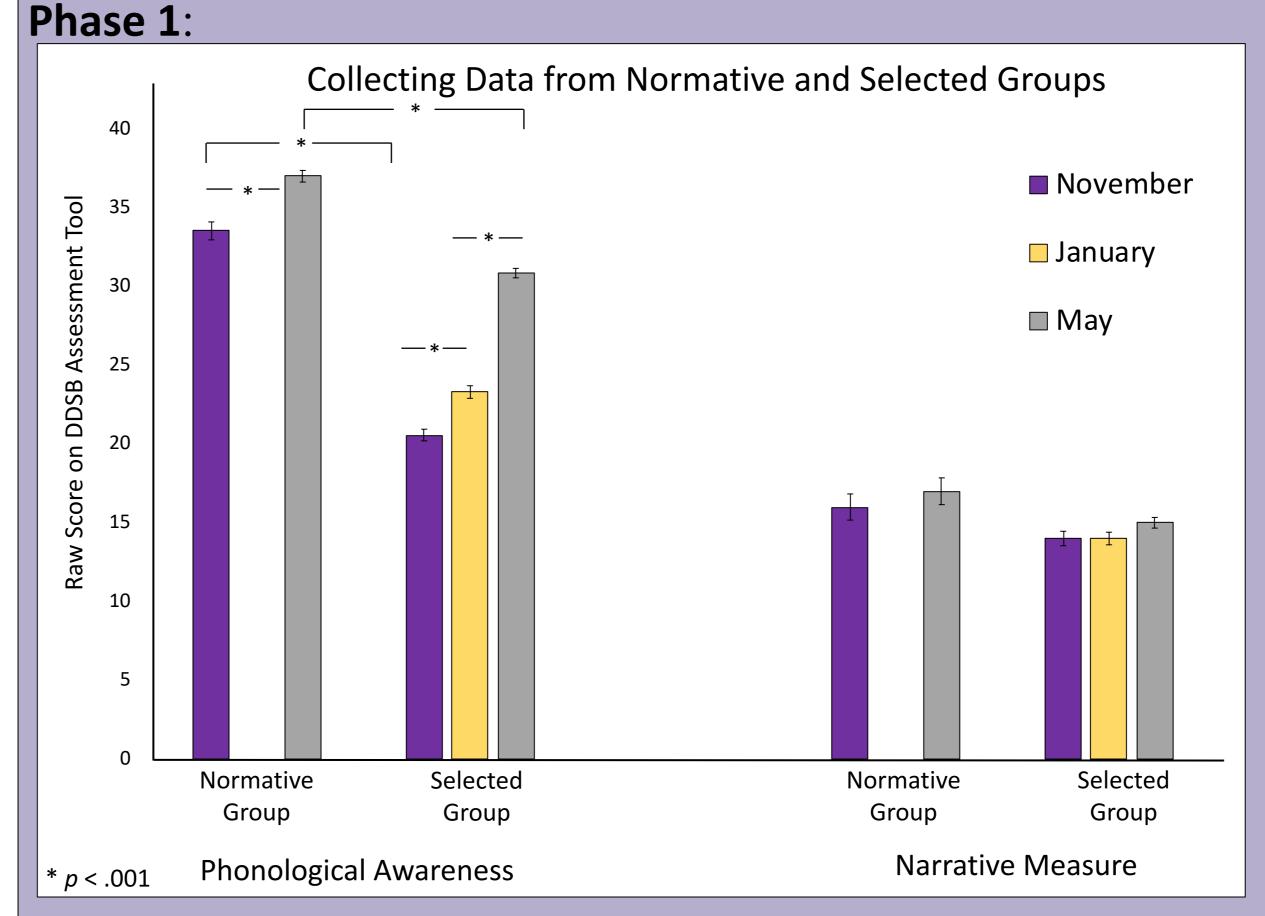**Phase 1**: Collecting norms and growth data
- Participants: Kindergarten students
  - Normative Group: typical language (n = 121)
  - Selected Group: identified by SLPs with weak language skills (n = 108)
- Outcome Measure
  - Completed board-designed assessment tool 2 (normative group) or 3 (selected group) times throughout the school year

Mixed-Method Survey: 28 SLPs provided feedback to determine barriers and facilitators to PBR

Phase 2: Validation Analysis
- Participants: Kindergarten students with range of language skills (n = 37)
- Outcome Measures
  - Board-designed assessment tool, and standardized tests of narrative language (TNL), sentence comprehension, (Shortened Token Test[4]), visuospatial working memory (finger window subtest from WRAML-2)[5], and core CELF-4[6] (sentence repetition, formulating sentences, word structure, following directions)

Results--

Phase 1:

Collecting Data from Normative and Selected Groups

Raw Score on DDSB Assessment Tool — November (purple), January (yellow), May (grey)

* $p < .001$

Phonological Awareness | Narrative Measure (Normative Group, Selected Group)

1. Significant differences between November to May on phonological awareness measure but not the narrative measure for both groups

2. Significant group differences on phonological awareness measure but not for the narrative measure

Phase 2: Validation Analysis

	Phonological Awareness	Narrative Retell	Narrative Comprehension Questions
Shortened Token Test	0.68**	0.13	0.45*
TNL: Comprehension Score	0.49*	0.44*	0.56*
TNL: Production Score	0.33	0.60**	0.43*
CELF-4: Core Language	0.30	0.25	0.22
Concepts and Following Directions	0.72**	0.27	0.55*
Word Structure	0.74**	0.22	0.45*
Recalling Sentences	0.66**	0.30	0.35
Formulating Sentences	0.74**	0.33	0.40*
Finger Window Subtest	0.47*	0.04	0.24

Moderate correlation = *
Strong correlation =**

Mixed-Method Survey (SLPs) ----------

Barriers to PBR
- Additional time for recruitment
- Additional assessments for research project
- Managing consent forms

Facilitators to PBR
- Institutional support
- Support with additional assessments
- SLPs found PBR useful and valuable to job

Further Questions
- Altering narrative portion of assessment tool
- Validating tool
- Effectiveness of phonological awareness and narrative intervention delivery

Researcher Observations ----------------

Barriers to PBR
- Missing information
- Location of participants to researcher
- Finding help to recruit and assess participants

Facilitators to PBR
- Research findings that demonstrate the importance of partnership
- Strong leadership from partners who believe in and can advocate for partnership

Implications ---------------------------------
- By using a PBR approach, partners have the potential to capture, change and create research highly applicable to the clinical setting without the need of knowledge translation

References ---
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