Efficacy of the *Cultivating Knowledge Through Professional Reading* Project to Promote Research-Informed Practice Among K-12 Leaders

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Academic research, if mined judiciously, has the potential to enrich K-12 leaders' professional practice. Yet, K-12 leaders remain skeptical about the value of research to inform their work (Davis, 2007). The purpose of this paper is to report findings from a study of the efficacy of the Cultivating Knowledge Through Professional Reading (CKPR) project. Designed for and instituted in one K-12 Canadian district, CKPR was designed to enhance leaders' engagement with academic research to inform their practice. Most participants agreed that academic research is an important source of information to support their practice; however, few reported that they regularly consulted research prior to the CKPR project. Seventy-nine percent of respondents noted that research shared via CKPR was usually or always relevant to their work and just over half noted that this made it more likely that they would consult research to support their practice. This article surfaces additional findings along with implications for enhancing K-12 leaders' uptake of research to inform their practice.

Keywords: research use, K-12 schools, school leadership, educational administration, decision-making

INTRODUCTION

More often than not, academic research plays a minor role in educational leaders' decision-making processes. In describing this phenomenon, Law (2002) asserted that administrators' practice is generally "experience-based", "eminence-based", or "habit-based" rather than research- or evidence-informed.

Federal, provincial, and local policies in many countries expect educational practice to be research-informed; yet, there is widespread agreement that there is an expansive and persistent research-practice gap – especially in the K-12 milieu (Coburn & Penuel, 2016; Cooper & Levin, 2013; Hargreaves, 2000; Malin & Keshaorao Paralkar, 2017; Tunison, 2016). In fact, "[K-12] education has a long tradition of ignoring or even attacking rigorous research" (Slavin, 2000, p. 19).

The reasons for this research-practice gap are myriad and it is beyond the scope of the present paper to chronicle them extensively. However, the literature tends to follow two main threads.

One thread insists that the "if educators were more research engaged ... teaching and learning improvements would follow" (Malin & Keshaorao Paralkar, 2017, p. 1). Furthermore, according to Hempenstall, the public image of teaching "has suffered, both as a profession in search of increased community respect and as a force for improving a nation's social capital, because of its failure to adopt the results of empirical research as [a] major determinant of its practice" (2014, p. 113). Consequently, so the argument goes, "education moves from fad to fad ... [changes do take place] over time, but the change

process more resembles the pendulum swings of taste characteristics of art or fashion ... rather than the progressive improvements characteristic of science and technology" (Slavin, 2002, p. 16).

An alternative thread cautions the K-12 education enterprise against heavy reliance on research to inform practice. Those who subscribe to this school tend to express concern that the current obsession to identify and enact practices "that work" relegates important theoretical research and well-constructed but small-scale qualitative studies to the fringes of practitioners' consciousness and, at the same time, reinforces a positivistic view of educational practice "stifling ... creativity and advancing a narrow definition of success" (Tunison, 2020). Along the same lines, Biesta (2007) noted:

On the research side, evidence-based education seems to favor a technocratic model in which it is assumed that the only relevant research questions are questions about the effectiveness of educational means and techniques, forgetting, among other things, that what counts as "effective" crucially depends on judgements about what is educationally desirable. On the practice side, evidence-based education seems to limit severely the opportunities for educational practitioners to make such judgements in a way that is sensitive to and relevant for their own contextualized settings. (p. 5)

In the midst of this debate, educators often harbor a deep skepticism of research. In the view of many practitioners, academic researchers "ply their trade in the rarefied air of the ivory tower" (Davis, 2007, p. 57) rather than in the "real world". This, in the view of many practitioners, yields "superficial data collection efforts resulting in findings that are seen by practitioners as impractical; presentations at semi-private academic conferences rarely attended by practitioners; and, publications in journals that exist largely for fellow academics" (Tunison, 2016).

Exacerbating this problem, according to Levin, Sá, Cooper, and Mascarenjas (2009), is that "most districts appear to have relatively weak processes and systems for finding, sharing, and using relevant research" (p. 6) – a situation that solidifies the space between practitioners and academic research. Finally, despite being tremendously experienced action researchers, most educational leaders have limited confidence as researchers and/or as research consumers (Levin, Cooper, Arjomand, & Thompson, 2011; Tunison, 2016.

Nevertheless, despite the research-practice debates outlined above, no one argues that educational research is valueless. Instead, most agree that practitioners and policymakers ought to use research to *inform* or *guide* practice rather than to *drive* it. Davies framed the issue as follows, "evidence-based education is not a panacea, but is a set of principles and practices for enhancing educational policy and practice" (1999, p. 108). What is needed instead, according to many practitioners, is research that (a) is meaningful to them; (b) takes into account their unique contexts; (c) results in improved professional practice; and (d) offers a path to better professional practice and, ultimately, to improved student outcomes. In any case, "while the barriers to greater penetration of research evidence into everyday educational practice are extensive ... the intent of research – improved outcomes for kids [and better professional practice] – is sincere" (Tunison, 2016).

While the canyon between research and practice is wide in most K-12 educational settings, there are individuals and organizations that inhabit that space and attempt to bridge the divide. Certainly, publisher display booths at practitioner conferences are typically awash with dozens of book enticing educators with "research-supported strategies that work" written in accessible language and offering step-by-step procedures that, if followed closely, are purported to make their schools better and/or their practice more efficacious.

More recently, supported by the ubiquity of the Internet and the proliferation of social media platforms that have become more user friendly with each iteration, research websites, blogs, vlogs, RSS feeds, and Twitter threads – among many other communication strategies – also operate in the research-practice canyon. Organisations such as the American Federation of Teachers and ASCD produce e-zines that also live in this space. Individuals also toil in this space. For example, Kim Marshall produces *The Marshall Memo* (TMM). The subject of an intensive study by Malin and Keshaorao Paralkar in 2017, TMM is "a prominent broker and product that is broadly focused, designed for the educator, and positioned as impartial in its presentation of evidence" (p. 2).

PURPOSE

This paper has two purposes. First, it describes the core components of a strategy called *Cultivating Knowledge through Professional Reading* (CKPR) developed and implemented by the author over an eight-year period beginning with the 2009-10 school year in an attempt to bridge the research-practice gap in one Canadian K-12 school district. Second, it reports findings from a survey conducted at the conclusion of the project to elicit a retrospective view of the efficacy of CKPR to cultivate school- and district-level leaders' engagement with primary academic research, influence their perspectives about the extent to which such research is useful both as a guide for professional practice and as an enhancement for their leadership efforts, and to cultivate the field to make it more likely that leaders would incorporate research into their decision making calculi.

Cultivating Knowledge Through Professional Reading: The Project

This section of the paper provides a description of the components of the Cultivating Knowledge through Professional Reading (CKPR) project. It begins with a brief overview of the setting in which the CKPR project took place. It continues with a description of the author's positionality in the project. Then, it concludes with a short chronicle of the major components of the CKPR project.

Setting

The CKPR project and subsequent research associated with it took place in Prairieland School District (PSD), a medium-sized Canadian urban public school district. At the time of study, PSD served about 25,000 students annually across 43 elementary schools (Kindergarten to Grade 8), two faith-focused semi-autonomous associate schools, one autonomous partner school on a First Nations reservation, and 10 high schools (Grades 9-12).

The PSD was in the midst of unprecedented growth fueled by several community- and policy-level shifts taking place all at once. Favourable provincial and federal immigration policies attracted a major influx of students from families of newcomers to Canada. Accelerating rural depopulation particularly of Indigenous families from federal reservations and other smaller communities – as well as a cohort of students with special needs that was growing in both absolute numbers and complexity of need also contributed considerably to the increasingly diverse district population. Second, like many cities, there was a significant income-living condition gulf from one neighbourhood to the next. Third, the provincial government centralized control of educational funding – removing school boards' autonomy to raise funds for local priorities and/or to backfill public funding shortfalls. At the same time, national studies concluded that children's pre-literacy skills, as they entered school were statistically significantly below Canadian norms and local testing supported this conclusion. Further, there was achievement for Indigenous students was substantially below that of the other students in the district.

Considering the pace of change in the district and the urgent need to respond, local administrators were searching for research-supported responses with a high likelihood of helping them improve over time and, at the same time, provide "quick wins" in the short term. It was against this backdrop that the CKPR was launched.

Researcher Positionality

For several years prior to launching the CKPR series in 2009 and during the entire eight-year span of the project, I was a member of PSD's district-level leadership team with responsibilities for collecting, analysing, and reporting about a wide range of organisational metrics (e.g., student achievement and engagement, employee and community perceptions, etc.) to support school- and district-level policy, planning, and practice.

My job description literally required me to "keep current" with relevant trends that may influence and/or support strategic planning and implementation of those plans. School-based and district-level administrators as well as elected members of the school board approached me on a regular basis with questions like "what does the literature say about …?" Sometimes they just wanted to discuss the various

potential options for practice and other times they asked for a formal review of the literature. I took this as evidence that there was an appetite to engage in exploration of research and undertook the CKPR project, in part, to feed that appetite.

At the same time, I served as an adjunct professor of educational administration and as a research ethicist at the local university. My research focused on evidence-informed practice and strategic planning, organisational effectiveness and improvement, and classroom assessment practices. As a research ethicist, I reviewed researchers' research methods and their knowledge translation plans to ensure participants' welfare was protected and to offer suggestions about enhancing the likelihood of effective uptake of findings amongst research participants.

Consequently, I had appreciation for and experience with the problems of practice common to local district leaders, access to relevant research that could inform these problems of practice, and broad appreciation for the importance of and processes for effective research knowledge translation. This combination of experience and background enhanced my credibility as a researcher and research mobiliser among district leaders and opened the door to implement the CKPR project.

Participant Pool

While the CKPR had an audience of approximately 350 over its eight-year run, the distribution list in any given year consisted of about 125-150 leaders. As mentioned earlier, PSD encompassed 53 schools at the time of study. All schools had a principal and a vice-principal (three very large schools had two vice-principals). Central office leadership included eight senior administrators (called superintendents), ten central office principals (called coordinators), five central office vice-principals (called instructional consultants), and 15 paraprofessionals (i.e., speech-language pathologists and educational psychologists).

Due to the district's long-standing practice of funding educational leaves in support of leaders' graduate studies, all central office administrators (superintendents, coordinators, instructional consultants, and paraprofessionals) and the vast majority of principals held Masters degrees; whereas, vice-principals were either working on or had already completed their Masters degrees. Thus, all participants had at least some experience interacting with research literature as graduate students.

The district did not subscribe either to research databases or individual journals, but administrators had access to research in a variety of ways. These included:

- Virtually all administrators completed their graduate studies at the local university and, as alumni, they retained access to university libraries – albeit on-site only.
- The union representing principals, vice-principals, coordinators, consultants, and some paraprofessionals had a robust research library with subscriptions to educational research databases – along with experienced reference librarians – to which they had access.
- All administrators had small annual professional allowances to support them in joining professional organizations – many of which also provide access to research.
- The proliferation of open-access journals also provided administrators with access to a wide range of research literature.

Cultivating Knowledge Through Professional Reading

The conceptual framework underlying the study from which this paper is drawn was an amalgam of Weiss's (1979) typology of the meaning of research use and Sudsawad's (2007) heuristic to explain the ways in which individuals use research. The four components of the conceptual framework for the CKPR and, by extension, this study included:

1. *Access to information* – provide access to research relevant to colleagues' problems of practice and draw their attention to it.
2. *Unpack research in context* and *enhance research literacy* – model effective strategies for interpreting research in light of one's own problems of practice and translating arcane academic syntax into practitioner-friendly language.

3. *"Quick wins"* – create demand for access to additional research literature by examining current local practice through the lens of relevant research.

4. *Stimulate among practitioners efficacy and confidence as researchers themselves* – help practitioners see their own self-reflective practice as research, clarify the theory-research-practice relationship and demystify the research process.

The components and processes underlying the CKPR project have been documented extensively elsewhere (Tunison, 2016, 2020). Consequently, the purpose of the next section of this paper is not to recount fully the story of CKPR but merely to provide a bird's eye view of the project to set the findings in context and, at the same time, reconceptualise the conceptual framework in light of the way in which the CKPR project played out. The substance and evolution of the CKPR project is presented below in two sections.

Building Capacity and Enacting the Plan. During the summer prior to launching CKPR, I curated a library of about 250 research articles addressing a broad range of issues faced by local administrators (e.g., instructional strategies, student assessment and evaluation, managing diverse student populations, Indigenisation of the curriculum, etc.). Then, on a weekly basis, I prepared and distributed to all leaders in the district a research brief highlighting an additional article or two relevant to local issues, priorities, or strategic foci. Mimicking the role of a conference session discussant, I included in each CKPR issue: (a) an executive summary and synthesis of key concepts, (b) suggestions about how the research could inform organisational priorities and actions, and (c) an invitation to explore the issue further with other articles already housed in the research library. Each article highlighted in the weekly briefs was also added to the library and, by the conclusion of the study, the research library held a collection of over 800 articles.

Three broad criteria were used for article selection. First, I used peer-review as a proxy for quality and prioritised higher-ranked journals as sources of literature for distribution. Next, I searched for articles addressing prominent issues in the district at the time (e.g., Indigenous education, English as an additional language, early literacy and numeracy, instructional leadership, strategic planning processes, etc.). I also focused on Canadian-based research when available – especially if conducted in settings similar to PSD. Finally, I regularly surfaced research with provocative epistemological stances and/or counterintuitive findings to challenge perspectives, spark debate, and widen the discussion about possible organisational responses.

At the outset of the project, my objective of the CKPR project was to achieve joint application of research to enrich practice. Consequently, additional capacity was required on a number of fronts. As illustrated in Figure 1, I conceptualised capacity in two ways: my own capacity to lead the work as an organisational discussant and my colleagues' capacity (and willingness) to engage with the research surfaced. My capacity included five major actions. Initially, I had to collect, vet, annotate, and distribute academic research to surface with my colleagues; then, to spark joint application of the research, I also had to contextualise it for the specific problems of practice I and my fellow district leaders regularly faced. District leaders' capacity included the willingness to read the research briefs and associated primary research as well as to engage with me and each other in critical reflection toward dialogue about the implications the research held for leadership practice in our district.

FIGURE 1
CAPACITY AND PROCESS TO ACHIEVE JOINT APPLICATION OF RESEARCH
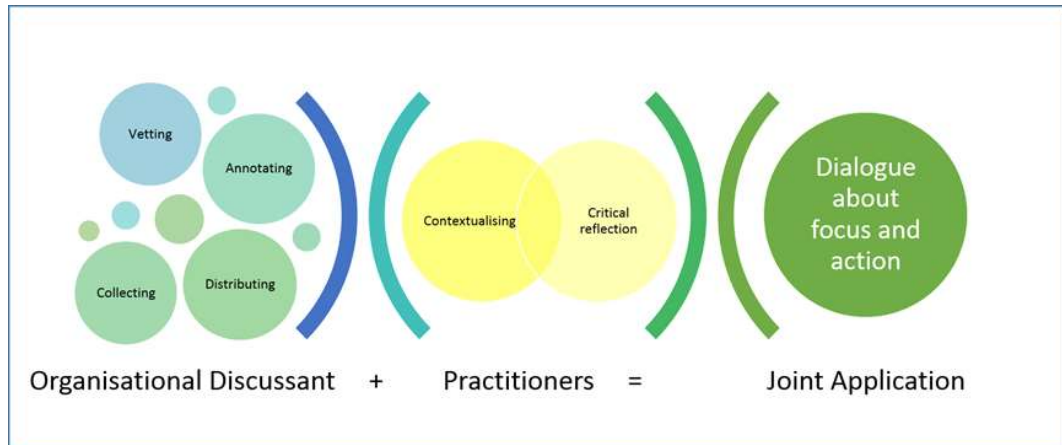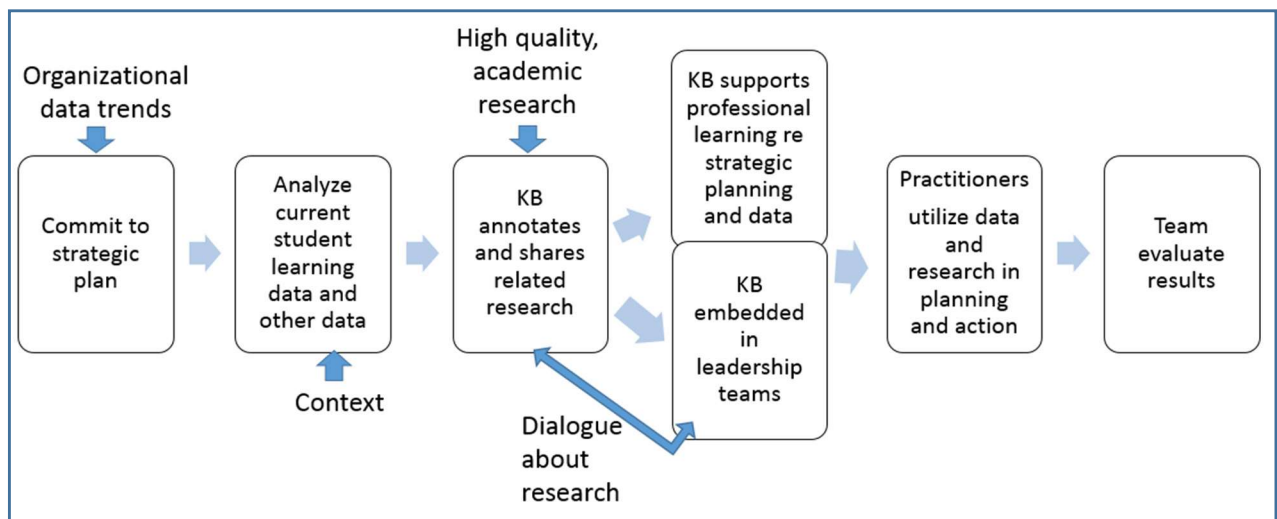

(Tunison, 2016: Figure used with permission)

Enhancing Context and Adding Complexity. Over time, as my confidence as organisational discussant grew, I became more explicit in drawing connections between the research surfaced in CKPR issues and student learning and/or organisational effectiveness issues highlighted through analyses of local data as well as both public reports and internal documents. I also began see my own role in this project evolve from a semi-passive discussant to an active knowledge broker (KB).

As illustrated in Figure 2, the core processes of the original CKPR model remained at the centre of the evolving organisational discussion of research but they were bolstered more explicitly at the front end by district and provincial data and informed by district strategic planning processes. At the back end of the model, I collaborated with colleagues to identify literature more closely aligned with district issues and the professional learning activities that were planned and delivered for administrators and teachers to enhance further the profile of primary academic research as a means to inform practice.

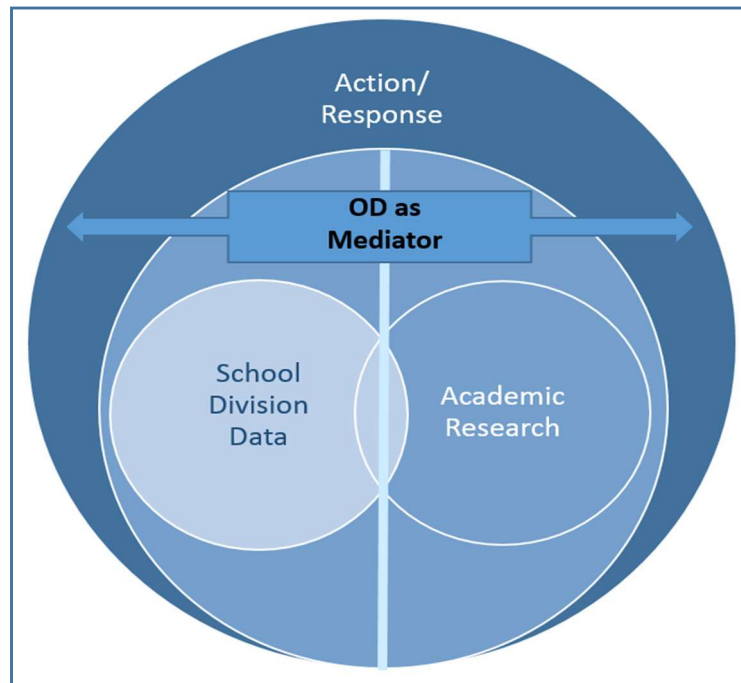**FIGURE 2**
COMPLEX CKPR KNOWLEDGE BROKERAGE MODEL

(Tunison, 2016: Figure used with permission)

Double-Loop learning in the Knowledge Cultivation Process. Ultimately, through the CKPR project, I intended, as Organisational Discussant and/or Knowledge Broker (depending upon the situation and topic), to foster a double-loop learning process in the district (see Figure 3). I drew attention to the opportunities for improvement identified in district data and highlighted research-supported actions that might help us respond effectively to the data.

Mode of Inquiry and Analysis Framework

In broad terms, this research examined respondents' perspectives about the intersection between the "problem" the CKPR project was designed to solve – that is, to provide K-12 leaders with easy access to a broad range of academic research with clear rationales about its applicability in the particular setting and suggestions about how to use it – and the effects it appeared to have. Considering this, a case study format was selected because, as pointed out by Creswell and Creswell (2018), a case study allows the researcher to "develop in-depth analyses of a case; often a program, event, activity, process, or one or more individuals … using a variety of data collection procedures over a sustained period of time" (p. 14).

FIGURE 3
CKPR DOUBLE-LOOP LEARNING MODEL

(Tunison, 2016: Figure used with permission)

Given my dual role as both district leader and academic researcher, both the university and district were asked to review and approve this research on ethical grounds and resolve any perception of conflict of interest. At the time of the present study, there were 132 eligible participants (i.e., those who were participants in CKPR for at least one academic year). Of those eligible, 33 individuals completed the survey (response rate of 25%).

Data were collected via a 23-item online survey consisting of 16 defined-response items (using a four-point Likert-type scales) and 7 open-ended questions (OEQ) (See Appendix A for the survey text). The survey was distributed to eligible participants by the school district via its internal email distribution system. Descriptive statistics for defined response items were calculated using the Statistical Package for the Social Sciences (SPSS). Considering the ordinal scales used for survey items and the number of responses,

inferential statistics and additional descriptive statistics (e.g., means, standard deviations, etc.) were inappropriate.

Textual responses to the OEQs were analysed using structural coding procedures. Saldaña (2016) suggested that structural coding is appropriate for studies that employ "standardized ... data-gathering protocols [with multiple participants] ... [in] exploratory investigations to gather topic lists or indexes of major categories or themes" (p. 297). When using this technique, the researcher reads the data several times to "categorize the data corpus into segments by similarities, differences, and relationships by using conceptual phrases" (Onwuegbuzie, Frels, & Hwang, 2016, p. 135). In this case, given that the OEQs included several sub-questions, each response was segmented into phrases related to each sub-question. Then, the phrases related to each sub-question were combined and reread to create a final set of thematic codes.

Findings

Defined response items were organised around three broad categories: respondents' orientation toward academic research, characteristics of the CKPR issues themselves, and the ways in which respondents interacted with the CKPR issues. Findings are reported according to these three categories. A section called *respondent demographics* is also provided to add context to the findings.

Results from OEQ analyses are interspersed among descriptive statistics to extend perspectives and enhance understanding. For reporting purposes, each participant was assigned a code (R1-R33). Quotations from their OEQ responses are attributed to them using these codes.

Respondent Demographics

The survey asked respondent two demographic questions: (a) the number of years they were included in the CKPR project and (b) the leadership role they had at the time of study. Just over half of the respondents (18) indicated that they had been part of the CKPR for all eight years; whereas, seven respondents had been part of CKPR for 5-6 years and eight respondents had been involved for four or fewer years. The number of participants in each role included:

- Superintendents – 4 (Note: In this setting, district CEOs are called directors, superintendents are immediately below the CEO in the organisational hierarchy)
- Principals – 13 (all elementary)
- Vice-principals – 9 (8 elementary and 1 secondary)
- Coordinators (designated as central office principals) – 3
- Instructional consultants (designated as central office vice principals) – 2
- Paraprofessionals – 2

Respondents' Orientation Toward Academic Research

Among the most significant factors influencing educational administrators' willingness to engage with academic research is their beliefs regarding the extent to which such research is worthwhile in the first place (Lysenko, Abrami, Bernard, Dagenais, & Janosz, 2014). The survey included three defined response items specifically aimed at ascertaining survey participants' orientation toward academic research. One item – *To what extent do you agree that academic research, in general, is an important source of information to support decision-making in the regular everyday work of K-12 leaders* – provides a clear indication of their perspectives in this regard. The remaining defined response items in this section – *How often did you consult academic research in your regular practice before you began receiving CKPR issues* and *How often do you read academic research other than that shared in the CKPR series and housed in the CKPR library* – serve as proxies for ascertaining respondents' commitment to using research in their practice by focusing on the frequency with which they accessed research outside the CKPR project.

While participants alluded to their orientation toward the usefulness of research to inform leadership practice in their responses to many of the open-ended questions, two survey items addressed the issue directly. Respondents were asked the following questions:

- What does it mean to you to use research? How often do you use research in the way you describe? What makes it more or less likely that you will do that?
- What factors (both positive and negative) affect the extent to which academic research is useful to support everyday leadership practice?

Findings are reported below according to three headings aligned with the defined-response items informing this section.

Academic Research Is Important as a Support for Leadership Practice. There was nearly unanimous agreement among respondents that academic research is important as a support to their work. Of 30 participants who responded to this survey item (3 did not respond), 15 strongly agreed and 13 agreed; while 2 strongly disagreed.

Survey participants were also generally positive regarding the extent to which they perceived research to be an important support for their practice. Virtually all of them saw research as being at least somewhat useful. Comments such as "I think [research] is important [because it helps us] stay abreast of current trends and topics" (R17) and "Everything we do should be based on research [because] we don't have time to waste on strategies and practices that are [ineffective]" (R14) were typical.

Many also framed their opinions about the value of research to inform practice by describing how they use research in their work. For example,

I look for academic, peer-edited literature, that has been 'vetted in the field' to frame my understanding of important educational topics (e.g. improving literacy in schools, improving outcomes for minority students, most effective math interventions, trauma-informed education) ... I use research ... at the beginning of the year when I am mapping out the learning [agenda] for my building and [developing our] strategic plan. [As a leader I am always asking myself], am I spreading the right information? If I am telling people to do things in a certain way, does the research point me in that direction? (R7)

How Often Did You Consult Research to Support Your Leadership Practice Prior to CKPR? No respondents entirely discounted research as a support to their leadership practice by indicating that they never consulted research prior to their inclusion in the CKPR series. Nevertheless, three-quarters (73%) noted that they sought research to guide them in their work only rarely (8 respondents) or sometimes (16 respondents) prior to their involvement with CKPR project. At the other end of the frequency spectrum, some respondents revealed a strong commitment to research-informed leadership practice – 7 (21%) said that they usually accessed research to support their decisionmaking and 2 (6%) noted that they always did so regardless of their involvement with CKPR initiative.

The most common observation among those who rarely or never read research prior to the CKPR was that they were too busy to "unpack" the language and syntax typically used by researchers that they saw as arcane. Others noted that academic research was often not directly applicable for them – requiring too much time to "translate" articles in light of their specific work contexts. For example, as noted by R9,

When the wording [of academic research articles] is not relatable or there is too much jargon, I am less likely to read research. I think conclusions need to be strong and well supported but more importantly [they should be explicitly] pointed out throughout the research. I think that would help people that are not as experienced with research articles, to look at the articles deeper and more thoughtful.

Others expressed reluctance to read research regularly because, from their point of view, the findings are rarely practical. For example, in the words of R25,

Research is often esoteric and ... so disconnected from lived realities that [takes the form of] an ontological or epistemological debate with little direct application. [For example], sometimes critical theory research just says everything is bad and offers nothing a person could do to [change] anything ... a pragmatic lens is rare in academic writing and the language is dense

Several also saw research literature as being beyond the purview of practitioners. In the words of R12, "I don't think [educators] necessarily see themselves as researchers or users of research." Some were confident enough in their own experience and knowledge that they did not require research to guide their

practice. For example, one respondent said, "I don't read research and rarely see the need to ... I know how to run a school and research doesn't really help me with that" (R7).

How Often Do You Consult Research Other Than CKPR-Highlighted Literature? In another attempt to gauge leaders' perspectives about the value of research to support leadership practice and the impact that the CKPR initiative may have had on participants' engagement with research, respondents were asked to indicate the frequency with which they consulted research other than that highlighted by CKPR issues. Data revealed that about two thirds of respondents noted that they seek additional research infrequently (2 participants never consulted additional research, 4 participants rarely did so, and 15 participants did so only sometimes). On the other hand, 12 (36%) said that they usually or always read additional research to support their leadership practice.

Open-ended question comments coded as addressing this topic typically pointed to barriers preventing K-12 leaders from accessing academic literature rather than expressing an unwillingness to do so. Most respondents identified a lack of time – especially in the face of ever-increasing and more complex demands in their leadership roles – as a major barrier to them seeking out research beyond that referenced in the weekly CKPR issues. Many also observed both that the sheer volume of research produced in the academy makes it difficult for them to know where to start and/or the fees charged by some journals is a barrier influencing the frequency with which they access additional research. Respondent 29's comment, quoted below, provides a robust view of this theme.

There is so much to sift through when accessing research. Finding the time to do that means searching during non-school hours and this is not always possible. If I knew the most authentic and professional places to access research – that would help me to filter what to read and/or not read.

Characteristics of the CKPR Issues

A preponderance of literature regarding the extent to which educators consult research to inform their practice points to a substantial relationship between research use and its relevance to present priorities, goals, and problems of practice (e.g., Dyssegaard, Egelund, & Sommersel, 2017; Levin et al. 2011). Another factor in this regard, according to Lysenko and colleagues, is "the ability to read, understand, and assess the quality of research ... and to translate research into practice" (2014, p. 19). Given that the purpose of the CKPR initiative was to foster participants' engagement with and use of research in their everyday practice, each issue modeled the process of translating research that directly addressed district priorities and recipients' problems of practice. Five defined-response items probed the extent to which I, as author of the CKPR series, successfully surfaced substantial links between the research highlighted in the series and the "real" work of those for whom it was written. The items included the following:

- How often was the research referenced in the CKPR series relevant to problems of practice in your work at the time they were issued?
- The executive summaries of the articles highlighted in the CKPR series were written in accessible language that helped me decide whether to read the complete articles.
- The CKPR series provided access to research not easily available to me elsewhere.
- The research highlighted in the CKPR series explored a wide variety of topics.

In an effort to explore participants' perspectives about the characteristics of the CKPR series in detail, participants were asked to respond to two open-ended questions. These included:

- Reflecting upon the direction and topics chosen for the CKPR issues you received, what were the best things about the series?
- What would have made the CKPR series better?

The findings are organised below according to headings framed by the defined-response survey items informing this portion of the research.

How Often Was the Research Referenced in the CKPR Series Relevant to Problems of Practice in Your Work at the Time They Were Issued? From the point of view of administrators who responded to the survey, the CKPR series tended to meet their needs with respect to its relevance to problems of practice they faced. Just over three-quarters said that the research highlighted in the weekly CKPR issues was either usually

relevant (22 of 33) or always relevant (4 of 33); whereas, five said that CKPR was sometimes relevant and 2 noted that it was rarely relevant to their work (no one said it was never relevant).

As mentioned earlier, I deliberately presented contrasting perspectives of most topics raised in the CKPR series. At other times, because I had solid support from the most senior administrators in the district, I risked highlighting research that, with local data as evidence of effect, presented findings calling into question the efficacy of initiatives promulgated and implemented across the district to provoke active reflection about prevailing perspectives and encourage consideration of course corrections and/or abandonment of initiatives clearly not having the intended effect. Some respondents observed that they particularly appreciated CKPR issues that presented research examining multiple sides of an issue. In the words of one respondent, "[I appreciated] that the research shared with us was relevant, and its goal was to help us, or aid us in sharing a concept or priority with staff. I also liked that we were often given articles that debated two sides of an issue" (R12).

Others observed that when research highlighted in the CKPR series was linked explicitly to district data – especially when it offered specific responses that seemed relevant to the contexts in which the schools reside – the CKPR was both engaging and useful. For example, "I enjoyed reading about the direct correlation between the information found in the article and our students" (R29). Another respondent noted, "Articles that discussed classroom strategies or school wide strategies that we could implement, and their results" were particularly helpful" (R25). A third proffered an additional layer of engagement influencing their perspective of the CKPR series.

I also appreciated arguments (in the academic not conflict sense) that I had with [the author], which helped in thinking about the implications. To a lesser extent, the summaries played that role, as well. (R16)

Despite being explicitly aligned with district priorities and data, the research and reflections were selected and prepared exclusively by one person – me. While I sought input from time to time and responded to the suggestions if I thought they would have wide appeal, I selected the weekly articles and surfaced my own interpretations.

The presenter of the CKPR did a great job of accessing a variety [of research and topics], however, at the same time, the choices were from one person (if this was not the case, we as the readers, did not know). The professional reading series could have been improved by opening up the perspectives from more than one presenter - allow us all to provide other articles to be shared through the series. (R18)

Finally, perception about the motives and message influenced individuals' engagement with the professional reading series as designed. Nevertheless, not all participants appreciated the contrasting views. A few felt that there was an underlying agenda to my choices of topic and focus. Of particular concern to these respondents was the belief that the CEO or other senior administrators played a role in the selection of topics and the interpretations of the presented research. While this was untrue, it provides an important caution to the risks inherent in using research to call into question accepted and/or widely-held opinions.

The Executive Summaries of the Articles Highlighted in the CKPR Series Were Written in Accessible Language That Helped Me Decide Whether to Read the Complete Articles. A major objective for the CKPR project was to translate academic research into practitioner-friendly language. It appears that the CKPR was successful in this regard. All but one respondent noted that the individual CKPR issues were always written in accessible language (19 strongly agreed and 13 agreed). Yet, in the open-ended items, a contrasting view surfaced. For example, in the words of R7, the series would have been better they "had been written in less cerebral language". Another stated that research with statistics and other complex perspectives was difficult to understand despite my attempts to translate this information effectively.

The CKPR Series Provided Access to Research Not Easily Available to Me Elsewhere. Another objective for the CKPR was to meet administrators' needs by supplying something that would be difficult or impossible for them to access elsewhere – recognizing that they may not have actually wanted the product in the first place. Based on participants' responses, it appears CKPR also met this objective. Thirty-one respondents agreed (11) or strongly agreed (20) that CKPR provided access to research that was unavailable to them elsewhere. In the words of R13, "the series allowed our administration to have access to research and created opportunities for dialogue about topics. I often used the reference list to find additional readings." (R13)

The Research Highlighted in the CKPR Series Explored a Wide Variety of Topics. In an effort to respond to emerging and ongoing local problems of practice, CKPR issues drew attention to diverse bodies of research. During the year immediately prior to the present data collection, topics highlighted in CKPR series directly addressed emerging and long-standing local problems of practice. Admittedly, there was a heavier focus on Indigenous/social justice, immigrant/refugee, brain-based/trauma-informed instruction research than would have been typical in previous years. As mentioned earlier, I had responsibility for collecting, analysing, and reporting district data. Through that work, I knew that there was a large and growing population of international students in the district – a phenomenon that was recent and required an immediate response. Furthermore, there was a substantial and persistent differential between Indigenous students and their peers – while by no means recent, the issue was persistent and urgently required a more effective response as well. Nevertheless, respondents largely agreed that the CKPR series addressed a wide variety of topics. Twenty-seven of the 29 participants who responded to this survey item either agreed (22 or 76%) or strongly agreed (5 or 17%) that this was the case; whereas two participants disagreed.

Open-ended responses revealed added key insights for reflection. Many respondents noted that the CKPR series, overall, surfaced topics that they may not have sought on their own. Others stressed the importance of relationship and trust in engaging professionals in critical reflection enhanced by research. "I liked having a trusted person with whom I had a professional relationship that was curating the articles. I valued the ability to reach out and ask a question, or seek out more information" (R4). Others noted the importance of drawing on recently-published research (while also sprinkling older favourites) focused on the most pressing issues facing district leaders. "I appreciated the up to date research that brought in perspectives to enhance the work. As well, there was a push to ensure Indigenous students were successful and this was [author's] priority (i.e., beliefs of students to suggested strategies that support success)" (R30).

Respondents' Interaction With CKPR
The third major objective for the CKPR was to encourage district leaders to interpret that research for themselves and, when appropriate, with their colleagues. The CKPR project cannot be successful unless the target audience actually reads the briefs. It turned out that the CKPR had a reasonably wide readership – at least among those who responded to the survey. This section presents results from the following defined-response survey items:
- I read CKPR issues at the time they were distributed.
- When I was unable to read them at the time, I archived CKPR issues to read or refer to later.
- Having access to CKPR research library made it easier to use research.
- I used the research highlighted in CKPR with colleagues in support of our work.
- I was more likely to consult research to support my work because of the CKPR.
- The research highlighted in the CKPR series sparked my interest in the topic and encouraged me to seek additional information about it.

Two open-ended items specifically addressed the nature of educational leaders' interaction with the CKPR. Among them were:
- What factors about specific CKPR issues made it more or less likely that you would read the executive summary?
- What factors about specific CKPR issues made it more or less likely that you would read the full article?

In addition, several respondents' comments to other survey items alluded to the ways in which they interacted with the CKPR. Text from these comments are interspersed the sections as appropriate.

I Read CKPR Issues at the Time They Were Distributed. While no respondents said that they always read CKPR issues, 24 participants (73%) reported that they usually or sometimes read CKPR issues; whereas, 7 (21%) respondents indicated that they rarely read the issues and 2 said that they never read them.

As expected, the broad topic selected for the CKPR was a major influence on the likelihood that respondents would read the executive summary. Whereas, the executive summary, in turn, determined, in large part, the likelihood that they would read the primary research highlighted that week. Specifically,

respondents were more likely to read the CKPR issue if it was: (i) directly connected to something for which they had specific leadership responsibility; and/or (ii) was already on their radars either from personal interest or from professional discussions with others. The following was a particularly robust comment from R15 is illustrative of respondents' perspectives connected to this theme, "If the topic was one I had responsibility for or interest in, I was more likely to read the executive summary … [also] sometimes … when someone else made comments about it, I read it to be in the loop on the conversation."

An unanticipated finding was that some individuals were more likely to read the CKPR issues if I shared personal anecdotes or used particularly descriptive language – although a few respondents added a caveat that the executive summaries were sometimes too long, making it less likely that they would read them even if the topic was of interest. In the words of R16, for example, "[I was more likely to read the CKPR if the author's viewpoints, summaries, and comments about the articles intrigued me." R15 added, "If questions were posed, or personal stories included, it made me want to read the article." Another respondent expressed appreciation of instances in which I shared personal provocative views or selected articles that challenged the perspectives about the issue at hand that were common at the time among leaders and/or teachers in the district and noted that this made it more likely that they would read CKPR issues. "If I disagreed with a statement in the summary, I was more likely to read the CKPR" (R13).

The biggest barrier to wide-spread engagement with CKPR was a scheduling issue. Given that the CKPR was a weekly series and I wanted to model commitment to professional reading and reflection, I did all the work on the series on my own time. Generally, I prepared the issues on the weekends and scheduled them for delivery on Mondays at 8:00am. Some respondents noted that, while they appreciated the CKPR's regular schedule, the weekly issues sometimes got lost in the dozens of other messages waiting in their email inboxes Monday mornings. This was a persistent issue but I am not sure that there is a good resolution to this challenge. I surveyed the CKPR recipient group twice over the eight-year project regarding the schedule for distribution. There was no clear preferred alternative among those who wished a change.

When I was Unable to Read Them at the Time, I archived CKPR Issues to Read or Refer to Later. One scenario that seemed reasonable to investigate in this study was the extent to which colleagues saved CKPR issues for later use. If they did so, that might suggest that the issue was relevant to their work – or might be someday in the future – and they wanted to keep it handy for future reference. Another scenario might see those who did not have time to read CKPR at the time might save it to review when their schedule permitted. Among the 33 respondents, 18 (55%) reported that they usually or always saved CKPR for later reference; while 9 (27%) saved them sometimes, and 7 (18%) rarely or never saved them.

While saving CKPR issues raises the possibility that the research might influence or inform practice at some point in the future, this will happen only if participants actually read the archived issues. A series of crosstabulations revealed that among the 26 respondents who saved CKPR issues for later reference at least sometimes, 16 (65%) always or usually read the cited research at some later point; while, the remaining 10 respondents rarely or never did so.

Several of those who regularly (always or usually) archived CKPR issues saw the process as an opportunity to create their own libraries of research that would be easy for them to access when need arose. In the words of R31, "[the archives made research] easily accessible to look it up quickly." Similarly, R11 observed

I archived all of the [CKPR issues] and could access them quickly. Even reading the [executive] summaries helped me [during my post-graduate studies] because they provided me with background knowledge on so many topics. When I wanted to reference the articles, I [knew where to find them and] could easily go into more detail with them.

Others noted that they archived the CKPR issues and came back to them from time to time as a support to their own professional development as well as an enhancement for their professional conversations with others. "I thoroughly appreciated the series as it kept Research at the forefront of our work and it was accessible. Conversations occurred with other team members to ensure that this occurred" (R16).

On the other hand, most of those who either did not regularly archive the CKPR or who did archive them but rarely or never accessed them at some point in the future noted that the pace and complexity of their leadership roles usually left little time and/or energy to read research. For example, R13 opined, "In

our busy lives (and in the times of teacher/administrative time workload intensification) it is very hard to make the time for the reading of [executive summary] emails and articles."

Having Access to CKPR Research Library Made It Easier to Use Research. As noted above, a key component of the CKPR project was to compile a comprehensive library of research. I saw the research library as a critical part of the CKPR strategy to support this objective Clearly, I hoped that the CKPR, while curated, written, and distributed on a weekly basis to meet the ongoing needs of district leaders, would contribute to an organisational culture that valued research as a regular part of decisionmaking and practice. This objective seemed much less likely if leaders continued to have difficulty gaining access to research that met their needs. While not necessarily referenced explicitly in the weekly series, the library held multiple examples of peer-reviewed academic research covering a plethora of topics. Of the 31 participants who responded to this survey item, 22 (71%) agreed or strongly agreed that the CKPR library made it easier to use research in their regular practice.

I Used the Research Highlighted in CKPR With Colleagues in Support of Our Work. If CKPR were entirely successful, research would not only inform individuals' work but also become a key support for collegial collaboration and organizational decision making. On occasion, I had opportunities to engage large leadership groups in person in collective review of research relevant to district priorities and lead active discussions about the implications for practice. However, the main research engagement strategy employed by CKPR – weekly emails – was more passive in nature. Thus, a good measure of the extent to which CKPR actually encouraged active research use is to determine whether participants used highlighted research with others. No one claimed that they always used CKPR research with others and 14 (42%) said that they rarely or never did so. However, 19 respondents (58%) indicated that they usually or sometimes did so.

I Was More Likely to Use Research Because of the CKPR. In some ways, the best one can hope for with a passive engagement strategy like CKPR is to increase the likelihood that leaders would consult research when making decisions. Of the 30 participants who offered a response to this survey item, just over half (52%) agreed or strongly agreed that the CKPR initiative made it more likely for them to use research; whereas, a third (10) disagreed and three respondents strongly disagreed.

Cross-tabulations of the responses yielded further evidence that the CKPR had achieved at least modest improvements in administrators' engagement with research. For example, 8 of the 28 respondents who agreed that academic research is useful for decisionmaking, indicated that they usually or always consulted research before the CKPR project; however, an additional 14 respondents noted that the weekly CKPR issues and associated research library made it more likely that they would consult research to support their work.

Furthermore, 6 of the 8 respondents who said that they rarely or never consulted research before the CKPR project noted that the CKPR made it easier for them to access research and 4 said that they were more likely to do so as a result; whereas, 9 of the 16 who said they sometimes consulted research before the CKPR noted that they were more likely to do so as a result of the CKPR.

The Research Highlighted in the CKPR Series Sparked My Interest in the Topic and Encouraged Me to Seek Additional Information About It. While the primary objective for the CKPR project was to engage leaders in collaborative reflection about the research highlighted from week to week, another objective was to make the issues interesting or compelling enough that recipients might choose to investigate further those topics that were aligned to their current problems of practice. To that end, each CKPR issue encouraged participants to consult the CKPR research library for further information about that week's topic.

CKPR fell somewhat short on this objective. About a quarter of respondents (27%) noted that CKPR issues usually or always sparked their interest in the topics such that they actually investigated them further; whereas, another quarter (27%) said that they never or rarely felt compelled to investigate CKPR topics further. The remainder of respondents (46%) noted that CKPR issues sometimes sparked their interest to read beyond the research included in the CKPR issues themselves.

From the open-ended comments, two primary themes emerged. First, there were times that the either the issue (my comments) or the articles themselves were too lengthy for easy engagement by administrators that were already very busy. "Sometimes the articles were too long and I didn't have time to read them

because of my other responsibilities" (R15). Second, while there had been opportunities to extend engagement in the research highlighted through the CKPR series (e.g., discussion boards, professional learning community conversations), such sessions had been both infrequent and ineffective. This part of the initiative required far more effort and commitment. In the words of R12, "It would have been great if we would have dug deeper in to some of the topics at [district-wide] leadership meetings or perhaps even book club like groups".

Conclusions and Implications

As with any study, this one brings with it both strengths and limitations. On the strengths side of the ledger, it is rare that educational research takes place over a sustained period of time – in this case, eight years. While it is true that the data were collected at a particular time in the life of the CKPR project, a majority of respondents were participants in the project for its entire run and offered extraordinary insights. On the limitations side, the project took place in one school district and the research was directed by the individual who developed and implemented the CKPR project. Furthermore, while I did not have supervisory responsibility over any of the participants, all of them were colleagues with whom I served on committees, participated in leadership activities, and shared in the collective responsibility to provide educational opportunities to the same cohort of children and youth. The study itself also had a moderate response rate from a relatively small population and all data were analysed by one person – who some might say could introduce considerable bias given that the project being studied was directed by him.

Nevertheless, with both strengths and limitations in mind, all but a few respondents noted that the CKPR helped them keep academic research in the mix to inform practice; albeit, some approached research with a significant skepticism. Based on both the author's experience as a researcher, K-12 educational administrator, and research mobiliser and the findings from this study, the root of research's credibility problem at the K-12 level appears to be two-fold. First is a lack of clarity about what research is, what it can tell practitioners, and what it means to use it. Second is a paucity of training and/or sophistication for interpreting research and separating valid, reliable research from other types of scholarly work. The CKPR project attempted to challenge this credibility on both fronts.

Key barriers preventing K-12 leaders' engagement with academic research included (a) the massive and ever growing volume of academic literature available in the marketplace, (b) lack of access to primary research publications, and (c) limited time both to find and translate research relevant to their contexts. The findings suggest that the CKPR project was successful in alleviating, at least in part, these barriers.

The findings have implications both for K-12 and post-secondary education institutions and for researchers as well. At the K-12 level, for example, a broader discussion needs to take place regarding (i) the role research ought to play to inform educational leaders' practice, (ii) what responsibility the leaders themselves need to take in seeking relevant research to support their work, and (iii) what responsibility districts, professional organisations, and districts have to assume to ensure that educational leaders' practice is grounded in appropriate research (assuming that research does, indeed have a role to play).

At the post-secondary level, the findings also have considerable implications. Considering that all participants completed graduate degrees, it is troubling that most of them said that they felt out of their depth when reading and interpreting research literature.

Broadly, this program of research is unique neither in focus nor in design. Presently, there is significant interest amongst academics and practitioners alike regarding the extent to which research informs practice. However, the CKPR project and the research associated with it are unique in several ways.

First, the CKPR itself is unique. It was developed and implemented by the researcher and all aspects of the project were curated in a K-12 district by an "insider" who was both an active researcher himself and a part of the district leadership team and who understood the problems of practice faced by leaders in the district to select literature that was directly connected to the problems of practice. Second, the CKPR project took place over an 8-year period. This provides a rare longitudinal picture of a particular approach to engaging educational leaders in reflections about and use of research. Additionally, despite methodological limitations such as inconsistent participant cohorts over time and a relatively low response rate, the findings suggest that the CKPR may be a promising strategy to increase research use among K-12 leaders. Finally,

the research provides academics with insights about the barriers one audience faces when trying to access research and offers suggestions about ways to increase their engagement with research.

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APPENDIX A – SURVEY TEST

The *Cultivating Knowledge through Professional Reading Series* (CKPR) was written and distributed to members of various leadership groups in Prairieland School District (PSD) on a weekly basis for an eight-year period between 2009-2010 and 2017-18 (inclusive). Over that period, about 400 issues – highlighting more than 600 pieces of research – distributed via email Monday mornings during the school year. Each issue consisted of:

- An executive summary of an academic research article or two,
- Observations about how the research connects to key priorities and initiatives in the division,
- How the research could be used with colleagues in their own settings,
- Implications for decision making and practice, and
- Links to the district portal location where the research articles were stored.

The objectives for the *CKPR series* were three-fold.

1. To provide leaders in PSD with easy access to academic research that they may not have had access to otherwise.
2. To identify and promote academic research as a source of information for professional inquiry specific to the work being undertaken and/or discussions that were taking place in the district at the time.
3. To support evidence-informed decision making and advocate for the use of research to inform policies and practices.

The following survey focuses on the ways you interacted with the *CKPR* issues – for example: how often you read either the executive summaries or the full articles, how often the research cited in the issues was useful in your decision making, and what you think about academic research in general.

Demographics

1. How long were you a recipient of the CKPR series?
   1-2 years, 3-4 years, 5-6 years, 7-8 years

2. What leadership role(s) did you hold during over this period? (choose all that apply)
   - Senior Administration
   - Coordinator
   - Instructional consultant
   - Student services team member (i.e., Speech Language Pathologist, Educational Psychologist, etc.)
   - Principal
     - Elementary
     - Secondary
   - Vice/assistant principal
     - Elementary
     - Secondary
   - Other: specify

Defined Response Questions

	Strongly Agree	Agree	Disagree	Strongly Disagree
In general, academic research is useful for everyday work.				
The weekly CKPR issues provided me with access to academic research to which I may not have access otherwise.				
Prior to being added to the CKPR distribution list, I had easy access to academic research.				
The curated research library housed on the CKPR portal offered access to a wide variety of academic research.				
The research referenced in the CKPR was relevant to issues present at the time they were shared.				
The CKPR executive summaries were written in accessible language.				
Having regular access to academic research through the CKPR made it more likely that I would consult research when making decisions.				
Having regular access to academic research through the CKPR made it easier to consult research when making decisions.				
	Frequently	Occasionally	Rarely	Never
How often did you consult academic research when making decisions before you began receiving the CKPR?				
How often do you discuss research with someone in PSD whom you thought had knowledge about research relevant to your problems of practice when making decisions?				
I read the CKPR issues at the time they were distributed.				
When I didn't have time to read them, I archived the CKPR issues for later reading.				
If I archived the CKPR issues, I read them at some point when they were relevant to my work				
The research shared via the CKPR sparked my interest in the topic and encouraged me to seek additional information.				
How often did you use the research referenced in the CKPR with co-workers?				
How often did you read research other than that shared in the CKPR? (if answer is F or O, direct to follow-up A)				

Follow-up "A"

- What made it more or less likely that you read research other than the PRS articles?
- How easy was that research to find?
- What kinds of research do you tend to read? (e.g., books, peer-reviewed journal articles, trade/practitioner magazines, websites, social media sites, etc.)

Open-Ended Questions

- What factors about specific CKPR issues made it more or less likely that you would read the executive summary? How about the research articles themselves?
- What does it mean to you to use research? How often do you use research in the way you describe? What makes it more or less likely that you will do that?
- Reflecting upon the direction and topics chosen for the CKPR issues you received, what were the best things about the series?
- What would have made the CKPR series better?