Research-Practice Partnerships in Education: Benefits for Researchers and Practitioners

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The purpose of this research was to study how researchers and practitioners from universities and school authorities in Alberta, Canada, lead eleven research partnership projects, shared work and learning responsibilities, as well as understood their common challenges. Project leaders (N = 38) revealed their perceptions of the research partnership through an online survey and semi-structured interviews. Practitioners indicated advantages to partnering such as access to research expertise and data analysis tools in addition to deepening their research skills for educational decision making. Researchers outlined three benefits to the partnership: having access to research sites, learning more about current issues in schools, and developing relationships with practitioners. The researchers explained that these relationships would facilitate their ability to complete future research and conduct knowledge mobilization activities that would reach professional and academic audiences. Both researchers and participants identified challenges, such as time, communications, reporting requirements, and unforeseen circumstances while engaging in these research partnerships.

L'objectif de cette recherche était d'étudier comment les chercheurs et les praticiens des universités et des autorités scolaires de l'Alberta, au Canada, ont dirigé onze projets de partenariat de recherche, partagé les responsabilités de travail et d'apprentissage, et perçu leurs défis communs. Les chefs de projet (N = 38) ont révélé leurs perceptions du partenariat de recherche par le biais d'un sondage en ligne et d'entrevues semi-structurées. Les praticiens ont indiqué les avantages du partenariat, tels que l'accès à l'expertise en recherche et aux outils d'analyse des données, en plus de l'approfondissement de leurs compétences en recherche pour la prise de décision en matière d'éducation. Les chercheurs ont souligné trois avantages du partenariat : avoir accès à des sites de recherche, en apprendre davantage sur les problèmes actuels dans les écoles et développer des relations avec les praticiens. Les chercheurs ont expliqué que ces relations faciliteraient leur capacité à réaliser des recherches futures et à mener des activités de mobilisation des connaissances qui toucheraient des publics professionnels et universitaires. Les chercheurs et les participants ont identifié des défis, tels que le temps, les communications, les exigences en matière de rapports et les circonstances imprévues, dans le cadre de ces partenariats de recherche.

External partners working together with practitioners in schools to support learning improvements is not a new concept. University faculty engage in partnerships with K-12 schools as catalysts for change and to impact teaching practices, student learning, and achievement (Ndunda et al., 2017). Opportunities to partner with and learn from expertise provided by

community members are another possibility (Lees, 2015). Partnerships can be reciprocal where partners can learn alternative perspectives (Woloshyn et al., 2005) and share expertise (Stephens & Boldt 2016). Abodeeb-Gentile et al. (2016) described how researchers and practitioners develop co-dependence where they work and learn together to become better educators. The authors noted that positive impacts, such as changes in instructional approaches, resulted in improved student outcomes. However, these partnership efforts do not always lead to immediate positive outcomes or intended organizational changes (Farrell et al., 2018).

Research partnerships can bring together researchers and practitioners to work as a team and collaboratively design joint research projects (Coburn & Penuel, 2016; Farrell et al., 2018; Maheady et al., 2016) as well as inform practice and theory. *Research-practice partnerships*, known as RPPs in the literature, are defined as "mutually beneficial and open-ended collaborations between educators and researchers seeking to improve educational practices and outcomes" (Ryoo et al., 2015, p. 1). RPPs are also referred to as long-term relationships between researchers and practitioners, where they focus on problems of practice, commit to mutualism, use intentional strategies to foster partnerships, and produce original analyses (Coburn & Penuel, 2016; Coburn et al., 2013). Partnerships for research purposes are emerging in educational contexts as a "strategy to make research matter" (Denner et al., 2019, p. 1).

Background

Alberta Education's Research Branch leads research activities within the Ministry; it conducts, supports, and shares research to meet the knowledge needs of Alberta's education system; works with educators and researchers in Alberta and across the world; and leads a competitive process for designing research projects and selecting research and participants. From 1999–2013 the Alberta Initiative for School Improvement (AISI) funded action research projects in school authorities based on their local needs (Hargreaves et al., 2009; Mayer & Townsend, 2013; Parsons et al., 2006). In 2017, the Research Branch resumed grant funding for research projects, developing a Research Partnerships Program; eleven were funded that year. Each project was led by a school leader from a school authority or a university researcher. The project teams often included additional members from the school authority, university researchers, graduate students, and contract consultants from other educational organizations (e.g., professional learning organizations). This unique context provided an opportunity to study how project teams worked and learned together, as well as their common challenges in leading grant funded research-practice partnerships.

In this study, a *long-term partnership* is defined as a research project with a timeline of one or more years with a formal commitment to engage equitably in the research by all the partners involved, including researchers, practitioners, and educational stakeholders from the community and other organizations. In other words, the partners determine the purpose of the study together and have a shared interest in the study (Ryoo et al., 2015).

Literature Review

There are many reasons research partnerships are formed in educational contexts and involve multiple stakeholders. There are three areas that emerged from the literature regarding the purpose of research-practice partnerships: (a) to form advice networks, (b) to share educational responsibility, and (c) to explore solutions for relevant educational issues.

First, partnerships are created to shape advice networks. Creating instructional advice networks and facilitating collaborative experiences can influence both teaching and learning (Supovitz et al., 2009). Partnerships provide possibilities for partners to form and expand advice networks for learning (Farrell et al, 2018; Supovitz et al., 2009; Yamazumi, 2008). Partnerships also require moving beyond traditional formal educational roles (such as school leadership and university researchers) to involve other actors (Spillane et al., 2003) or stakeholders as part of the network. These stakeholders include government, administrators, educational consultants, networks, and community members who are both formally and often informally connected to either the researcher or the practitioner (Lees, 2015).

Second, educational partnerships are formed to share responsibility with a commitment to research and practice. Partnerships can help promote public educational responsibility (Hargreaves & Shirley, 2012) or shared responsibility for teaching and learning (Killion, 2013; Neumerski, 2012). Snow (2015) argued this shared responsibility and mutual dependence is not currently the standard way research is conducted; she proposed a practice-embedded educational research model as an approach for researchers and practitioners to collaborate and share educational responsibility for improvement. Likewise, Abodeeb-Gentile et al. (2016) argued for school-university partnerships as a means to generate research where practitioners and researchers collaborate and have a commitment to learn from both research and practice.

Third, partnerships are created to explore solutions for relevant educational issues. Maheady et al. (2016) posited partnerships as a solution for solving contemporary educational issues and bridging theory to practice as practitioners and researchers collaborate. The partners, including researchers, practitioners, and possibly other community members, collaborate by designing the research questions together and collaboratively; the partners establish the goal of the research and aim to impact both research and practice (Abodeeb-Gentile et al., 2016). In research-practice partnerships, as noted by Snow (2015), we are called towards "a new model that emphasizes the interconnections of research and practice rather than the gap between them" (p. 460). Traditionally, in exploring educational issues, the researcher was positioned in the role of knowledge producer and the practitioner was positioned in the role of knowledge consumer. Research-practice partnerships position researchers, practitioners, and other educational stakeholders in equal positions and as valuable contributors in exploring solutions for relevant educational issues (Snow, 2015).

Challenges of Research-Practice Partnerships

Past research has identified challenges that emerged from research-practice partnerships. For example, Coburn et al. (2013) discussed the following challenges: bridging the different cultural worlds of researchers and practitioners, developing and maintaining trust, maintaining mutualism, balancing local relevance with scalability, meeting school authority timelines while maintaining depth and quality of research, aligning partnership work with academic norms and incentives, and challenging school and school authority contexts. Farrell et al. (2018) listed three key challenges from their study of funded partnerships: (a) turnover of positions for those involved in the partnership as well as leadership turnover within educational organizations more generally, (b) differences in researcher and practitioner typical timelines or pace of work, and (c) having the "right people at the table" in terms of active members in the partnership with decision-making authority to act on the partnerships' findings (p. 5).

Successful Research-Practice Partnerships

Research-practice partnerships in education have demonstrated positive outcomes (Coburn & Penuel, 2016). For example, researchers indicate partners who work together to establish a vision (Killion, 2011), sharing responsibility to develop a collaborative professional relationship (Stephens & Boldt, 2016). Additionally, partners can work together to establish shared goals (Killion, 2011, 2013). Woloshyn et al. (2005) argued "these goals do not need to be identical" but that "they must be compatible" (p. 258) so that each partner gains from the relationship. Killion (2011) noted that partnerships are successful if they are mutually beneficial which supports the formation of compatible goals. Stephens and Boldt (2016) concluded that potential partners should meet regularly, ask difficult questions, and establish conditions for the relationship. They offered four questions that should be addressed: Who will be partners? How will each of us simultaneously renew ourselves and help others renew themselves? What will each partner contribute? What will each partner receive?

Throughout a research project, success might be reviewed by research teams by considering elements of knowledge mobilization, what Briggs et al. (2015) qualified as reach, relevance, relationships, and results:

(1) Reach relates to the number, variety, and extent of your connection to your desired audience, how many different perspectives and how deep into a particular community do you reach? (2) Relevance relates to how applicable and meaningful your research is to an audience. (3) Relationship includes the wide variety and types of relationships to be built and maintained to support reach, relevance and results. (4) Results are about the actual use of your research and what outcomes occur from its use. (pp. 2-3)

For example, Phipps and colleagues (2017) helped teams outline plans for knowledge mobilization and the projected impact in their grant applications by (a) identifying anticipated engagement and audiences; (b) framing the goals/objectives based on what they want to achieve and how they plan to achieve it; (c) mapping the activities to the goals and objectives for academic and non-academic audiences; and (d) considering a longitudinal view of the impact, indicators, and accountability for the knowledge mobilization plans.

Research partners often plan to share the results of their research together. Farrell et al. (2018) discussed a topology based on Weiss and Bucuvalas' (1980) earlier work related to educational leaders' possible uses for research results:

- *Instrumental use*: Research is applied to guide or inform a specific decision.
- *Conceptual use*: Research induces changes in the way a person views either a problem or the possible solution space for a problem.
- *Symbolic/political use*: Research is used to validate a decision or legitimate decision already made.
- *Process use*: Leaders incorporate the processes of research into their own work, for instance, launching an evaluation study, participating in a grant proposal that includes an evaluation component, or collaborating with others to analyze data. (p. 10)

Research partnerships commonly describe their success by describing the significance of the research; how the research can be used by others; and using evidence detailing the reach,

relevance, relationships, and results from the research project (Briggs et al., 2015; Farrell et al., 2018; Phipps et al., 2017).

Theoretical Framework

Theoretical frameworks, such as Henrick et al.'s (2017) five dimensions have been used to help describe and assess effective research-practice partnerships. With concerns about whether a research project is impactful or makes a difference in educational contexts, a framework can be helpful for examining the effectiveness of research partnerships. The five-part framework for research-practice partnerships includes

- 1. Building trust and cultivating partnership relationships;
- 2. Conducting rigorous research to inform action;
- 3. Supporting the partner practice organization in achieving its goals;
- 4. Producing knowledge that can inform educational improvement efforts more broadly; and
- 5. Building the capacity of participating researchers, practitioners, practice organizations, and research organizations to engage in partnership work.

Researchers have provided confirming evidence for this framework (e.g., Farrell et al., 2018). However, further research is needed to examine these dimensions in relationship to predicting successful research-practice partnerships (Tseng, 2017) and to determine if there are additional dimensions that could be considered. For example, findings from research-practice partnerships suggest strategies, such as regular communications and flexibility to adjust and respond to changes that occur during the long-term partnership, can help mitigate challenges inherent in working in partnerships and result in an effective partnership (Farrell et al. 2018). It is important to invest sufficient time towards research-practice partnerships: "building a joint research agenda and process takes time, and trust building is ongoing" (Denner et al., 2019, p. 10). Additionally, time is needed to communicate and use the research resulting from research-practice partnerships (Tseng, 2017). Funders also have a role in the success of research-practice partnerships and need to consider the ways project teams are supported (Coburn et al., 2013). Further research is needed to examine research-practice partnerships and to explore the relationship between researchers and practitioners and other stakeholder organizations, and how to prepare for and engage in meaningful knowledge mobilization activities.

This study, therefore, was undertaken to examine how members of project teams involved in a research-practice partnership worked and learned together, and their common challenges in leading grant-funded projects. The overall research question guiding this paper is: What are the advantages and challenges in engaging in research activities with partners?

Methodology

Drawing on the benefits in using case study methods in educational evaluation (Fitzpatrick et al., 2011), this study explored the experiences of researchers and practitioners involved in the 2017 grant funded projects through Alberta Education's Research Partnerships Program. The research focused on eleven research teams as instrumental cases (Brinkman & Kvale, 2015; Creswell, 2012; Stake, 2006) to illustrate how project teams worked in partnership to conduct research in schools. In order to explore participant perceptions of research partnerships, Henrick et al.'s (2017) five

dimensions of research-practice partnerships were used as a lens for analysis followed by a cross-case analysis and synthesis (Stake, 2006; Yin, 2006, 2012).

Participants

Participants invited to participate in the study included members of project teams, such as practitioners from school authorities, university faculty and graduate students, and third-party organizations. Each project team was required by the funding agency to have a project lead who was either a principal investigator (faculty) from a university or a key contact from a school authority. Contact information for the project lead and reports (interim and final) were provided to the researcher by the funding agency. Project leads from nine out of the eleven grant-funded projects agreed to provide contact information for members of their respective teams. Based on the information received from the project leads, 94 recruitment notices were sent to prospective participants and members from nine of the teams participated in the survey (N = 38) and members from eight of the teams participated in the interview phase (n = 14) of the study. The roles of the participants (members of the project teams) are shown in Table 1.

Methods

Table 1

There were eleven interim and four final reports that were provided to the researcher. All the final reports were not available as the remaining projects had unique timelines and were not all complete during the timeframe of the study. In addition to the interim and final reports, survey and interview data informed the findings and were gathered during two sequential phases.

- Phase I: Survey—The online survey included an embedded consent form, four questions
 confirming participant identification and association with specific partnerships, nine
 questions with a 5-point Likert scale for responses, and five open-ended questions
 (Appendix A).
- Phase II: Semi-structured Interview Protocol—Audio recorded, semi-structured individual
 interviews were conducted with project team members and transcripts were reviewed and
 confirmed by each participant (Appendix B).

Number and Role of Survey and Interview Participants

Role	Number of Survey Participants	Number of Interview Participants	
Researchers:			
Faculty	12	4	
Research Assistant	2	1	
Practitioners:			
District Leader	9	5	
Principal	4	2	
Teacher	4	1	
Third Party (e.g., contract consultant)	7	1	
Total Participants	38	14	

Data Analysis

Survey responses were analyzed using graphic representations for demographic information, and descriptive statistics were used for basic data trends, response activity, and levels of agreement. Textual responses to open-ended survey questions were analyzed using two cycles of coding according to Miles et al. (2014). The first cycle involved descriptive coding and the second cycle involved collapsing codes into themes. Transcribed interview transcripts were coded manually also using two cycles of coding (Saldaña, 2013). The survey text responses and interview data were merged and uploaded into NVivo software (Version 11) to organize and conduct further analysis using Henrick et al.'s (2017) five dimensions of research-practice partnerships and to refine the findings. Qualitative approaches used in this study were suited for the deep exploration of a problem that required a detailed understanding of a central phenomenon (Denzin & Lincoln, 2013; Miles et al., 2014).

In order to ensure the trustworthiness of the interpretation (a) the data were triangulated from the surveys and interviews, (b) purposeful sampling was used (Palinkas et al., 2013), (c) a third-party transcriber was employed, (d) transcripts were provided to participants following the interview for confirmability, (e) emerging data results were compared with the existing literature, and (f) an audit trail was maintained during data collection and analysis.

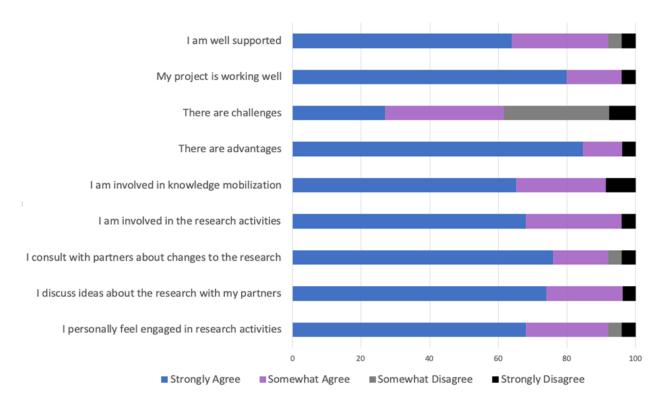
Findings

Overall, the data gathered from the survey responses, interviews, and reports indicated that team members who were part of this study were satisfied with their involvement in conceptualizing, designing, and enacting research-practice partnership projects despite the challenges encountered in conducting research with partners. The survey responses targeted perceptions about level of engagement, communication, consultative process, involvement, as well as perceived advantages, challenges, and support were positive and favorable as shown in Figure 1. Similarly, all interviews with participants revealed that they were satisfied with their involvement despite the challenges encountered in conducting research with partners.

Figure 1 provides a summary of the survey responses for questions related to participant involvement in the Research Partnerships Program. For purposes of reporting percentage of agreement, the responses for strongly agree and somewhat agree were combined. Participants (92%) agreed they were well supported as a member of their project. Overall, 96% of the survey respondents agreed the research project they were involved in was working well. Most participants indicated that they were actively involved in the research activities and 91% indicated they were involved specifically with the knowledge mobilization activities. Most respondents (96%) discussed ideas about the research with partners and 92% consulted with their partners about making changes to the research. Across all projects, 92% of the participants reported they were personally engaged in their partnerships.

The majority of participants (96%) revealed that there were advantages of partaking in research partnerships, while 62% indicated there were issues with the research partnership project; these were reported in their interim and final reports. Rewards and challenges were explored in more depth during the interviews with participants in Phase II of the study.

Figure 1
Summary of the Survey Responses for Questions Related to Participant Involvement in the Research-Practice Partnership



Benefits for Researchers and Practitioners

Participants in practitioner roles (district leaders, principals, teachers) identified benefits to engaging in research activities with partners, such as having access to research resources and deepening their own research skills for educational decision making. Findings suggest practitioners were satisfied with the research activities. There were three specific areas that practitioners mentioned: being part of a research project, learning more about research activities, and learning from researchers' perspectives. Specifically in relation to the latter, the practitioners used the viewpoints of the researchers to inform the problem of practice and inform school or district activities (e.g., professional learning, processes, policies).

Practitioner benefits included having access to resources such as researcher expertise, research assistants, data collection tools (such as survey software), data analysis software, knowledge mobilization opportunities, and an increased understanding of the research process. One of the practitioners described how the project would not have been possible without the partnership:

This project definitely would not have moved ahead without having the partnership with the University, and obviously we wouldn't have the concrete data that we're going to get from it, and I think just again being a smaller school division, just having that opportunity to be engaged in research has been huge.

Participants in research roles (faculty, research assistants) identified benefits in engaging in research activities with partners, such as having access to research sites. The researchers also noted school authorities need support with research activities; school authorities gathered vast amounts of data and there are limited personnel, time, and expertise for practitioners to analyze the data. Researchers appreciated the access to research sites and engaging in meaningful research as noted by one of the project team researchers who was interviewed:

So, if the school or the jurisdiction, the school district, comes and says, "We want to find out if this working" or "We'd like to try this", then to me educational research is in its true home. So, how lucky am I to visit someone's home?

Foundation for Developing Research Relationship

Practitioners and researchers from the project teams recognized a benefit of the partnership was the opportunity for developing ongoing relationships and possibly designing future research projects together. The value of the partnership with researchers was noted by one of the practitioners:

It's kind of forced some conversations we may not have had otherwise. You know, it's introducing new ways of thinking. When we first drafted our proposal, we were both really pleased with it. And I said, "Oh, I'm so excited about this, but it's a shame that it's just this one time." And Researcher1 said to me, "Well, does it have to be?"

Participants also acknowledged the role of the Ministry in actively supporting the projects and engaging in the process through making provisions for funding as well as (a) supporting linkages that initiate and create relationships between a researcher and a practitioner; (b) ensuring that there is mutual benefit in the interest of coming together under a research-practice partnership project; and (c) serving as a hub which can assist with the matching of need, ability, and expertise (for both practitioners and researchers). In the final reports, three project teams commented on the value of pre-existing relationships and how working together on other research projects facilitated their interactions for this research-practice partnership. In some cases, this was the first time a school authority engaged in a research-practice partnership and found this project was a springboard to other research projects. For example, members from one project team that did not have prior experience working together with their partners shared their future plans for working together on additional projects.

Sharing in Knowledge Mobilization

Participants reported knowledge mobilization activities as a benefit in engaging in a research project with partners and as the projects evolved participants were involved in sharing research activities with professional and academic audiences. Levin (2008) described knowledge mobilization as "getting the right information to the right people in the right format at the right time, so as to influence decision-making. Knowledge mobilization includes dissemination, knowledge transfer and knowledge translation" (p. 12). Dissemination is most often viewed as "making research available through the traditional vehicles of journal publication and academic conference presentations" (p. 12). Knowledge transfer involves "transferring good ideas, research results and skills between universities, other research organisations, business and the wider

community to enable innovative new products and services to be developed" (p. 12). Knowledge translation addresses the collaborative and systematic review, assessment, identification, aggregation, and practical application of research by key stakeholders.

Participants reported that knowledge mobilization, either previously completed or still in the planning stages, involved both academic and professional audiences. Examples consisted of

- Presenting at conferences (36%);
- Writing articles, papers, and other publications (36%);
- Sharing amongst divisions, professional learning communities, and networks (21%); and
- Communicating through generative dialogue (internal teams; 7%).

Several project teams were far enough in their research to discuss the results using terms such as purposeful, relevant, implementable, and scalable. One of the practitioners commented about the value of learning from local research efforts:

I think the important thing is that it's from Alberta; so often you hear things from Australia or New Zealand, you know things like that, and I think the fact that it's Alberta based is huge, and I think that does have a big impact on decisions that school divisions can make, because it's not from a far-off land it's from right here.

Another noteworthy theme that emerged from the data was the momentum leveraged through engaging in knowledge mobilization in the beginning stages of the research and sharing early successes. Project teams reported knowledge mobilization activities that occurred during different stages of the grant period and activities planned for future dates. The knowledge mobilization activities comprised gatherings with community members, conferences (both professional and academic), conventions, specialist council events, and other provincial organization events.

Challenges with Research-Partnerships

Participants in the study reported many challenges in engaging in research activities with partners dependent on individual project circumstances. Participants expressed a need for more time and flexible structures to mitigate the challenges. Challenges included

- time;
- working with partners unfamiliar or inexperienced with the research process;
- understanding/respecting team member roles and responsibilities;
- excessive reporting;
- trying to fit reporting and data interpretation into prescriptive templates provided by the Research Partnerships Program;
- orchestrating multiple jurisdiction ethics approvals;
- geographical limitations (such as distance);
- managing groups of people;
- unforeseen circumstances (such as role changes, political circumstances, weather

conditions); and

• the need for flexible funding.

A summary of the challenges encountered by participants is presented in Table 2, with sample comments from the interview transcripts to help contextualize each challenge.

In summary, participants reported advantages and challenges related to research-practice partnerships. Overall, research partners that were part of this study were satisfied with their involvement in conceptualizing, designing, and enacting research-practice partnership projects despite the difficulties encountered in conducting research with partners. Through in-depth interviews with practitioners, key advantages were identified, such as access to resources, research expertise, and data analysis tools. Practitioners also noted an increased understanding of the research process and deepening their own research skills for educational decision making as a benefit to being involved in a research-practice partnership. From the researcher's perspective, rewards were specifically stated in relationship to knowledge mobilization, having access to research sites, learning more about current issues in schools, culture, and developing relationships for future projects.

Table 2
Challenges of Participating in a Research-Practice Partnership

Challenge	Sample Participant Comments
Time and balancing workload	It's a large investment of time. It takes a lot of time to do work like this properly, and our administrators feel some guilt, and associated extra work to catch up after, when they are out of schools doing this work together Reconciling the time expected to do what is expected within the school day away from students. [Practitioner]
	Time management with my other research projects. [Researcher]
	For projects involving First Nations, it takes longer to establish trusting relationships and one year is not nearly long enough for these projects. They should be a minimum of two to three years - with the additional budget to support that. Time [is required] at the outset to establish [a] worthwhile research focus. We have been lucky in this aspect as we were able to get research projects funded with partners with whom we already had a working relationship. Simply finding a time to meet in order to collaborate was not possible so we found ways to work around that. [Third Party]
Inexperience with research	It was challenging planning the project without having any familiarity with [the methodology]—however I think the openness in the end made the learning richer. [Practitioner]
	Understanding the specific requirements of the research process and the specific roles that the University researchers play in ensuring that the needs of the study are met in a process that meets the needs of our schools. [Practitioner]
	In my experience non-university partners are in general not familiar enough with the research fields to know what research has already been done, and what research might have the largest impact. So the research ideas are not robust or impactful unless there is time to collaboratively develop a worthwhile focus. The research proposal approval process should include the opportunity for some education about the research fields and the most recent research to inform applicants [Third Party]
	(continued)

Table 2 (continued)

Challenges of Participating in a Research-Practice Partnership

Challenge	Sample Participant Comments
Lack of Clarity for Roles and responsibilities	The role of individuals and parents who may represent a potential break of confidentiality, or power imbalance regarding participants. [Researcher]
	When one has to evaluate a principal and also conduct regular generative dialogue (monthly for an hour+ other activities that connect) with the team. For the education sector, generative dialogue conceptually can be a struggle [Practitioner]
Too much reporting	The only challenge is the reporting to Alberta Education when we don't have any relevant developments to share. [Practitioner].
	In no particular order: the frequency of reporting required by Alberta Education. [Researcher]
Ethics approval and administrative processes	Ethics approval. The (slow) pace of the ethics approval process. [Researcher]
	Multiple governing bodies for ethics approvals. [Researcher]
Distance/Travel	The distance and travel time needed to visit the site. [Third Party]
	Although we utilize digital means to meet, face to face is much more powerful. Travel is difficult to coordinate as is time away from schools during the school year. [Practitioner]
Managing groups	Collaborating with principals of three schools across the district in a timely fashion and in a meaningful way. [Practitioner]
	Constraints when working/collaborating as part of a large team and facilitating communication within a large group of people was a challenge. This is difficult to avoid when there are many voices and schedules at the table. [Third Party]
Extenuating Circumstances	Building relationships with the First Nations community we are working with amidst recent changes in the Band Leadership. There have been changes in who is working on this project within the educational network which has made it hard to build relationships with the teachers and community. [Third Party] The changing dynamics of teachers and schools. [Practitioner]
Funding	I wish there was more flexibility in terms of how funding is used (e.g., travel outside of Alberta). [Practitioner]
	There should be a range of amounts given such factors as First Nations, Métis and Inuit, travel distances and costs, etc. [Third Party]
	It is the cost required to continue the implementation after concluding the readiness phase. Consistent understanding of the purpose of the project and outcomes. [Practitioner]

Discussion

In this study, the framework with dimensions of effective research-practice partnerships developed by Henrick et al. (2017) was used as a lens for interpretation of the results. The findings aligned with the five dimensions and a sixth dimension emerged in the data in relationship to the dynamics of a research team and the ability to cope with changes in the project plan (Table 3).

Table 3

Dimensions of Research-Practice Partnerships					
	Henrick et al. (2017) Five dimensions of effective research-practice partnerships	Dimensions of effective research- practice partnerships for Project Teams in Alberta			
Relationships	Building trust and cultivating partnership relationships	Role of ministry serving as a hub; making provisions for funding; supporting linkages; ensuring there is mutual benefit Relations (complex adaptive systems)			
Research to inform Action	Conducting rigorous research to inform action	Research plan required by teams Structures and features			
Convergence towards shared purpose	Supporting the partner practice organization in achieving its goals	Perceived impact on student learning (practitioners); institutional impacts for researchers; goal setting part of the plan; Importance of fit and reciprocity; Convergence towards a shared purpose			
Knowledge Mobilization	Producing knowledge that can inform educational improvement efforts more broadly	Knowledge mobilization part of the project plan; Structures and features			
Capacity-Building	Building the capacity of participating researchers, practitioners, practice organizations and research organizations to engage in partnership work.	Generative capacity to adapt			
Dynamics		Dynamics—ability to cope with changes and challenges			

Dimension 1: Relationships

Relationships are a characteristic of complex adaptive systems to describe the nature of interactions between stakeholders (Davis & Sumara 2006). Practitioners and researchers on the project teams who were interviewed discussed an overall appreciation for funding through the ministry that provided an opportunity to develop relationships with partners for research projects. The educational partnerships were formed to share responsibility and commitment to research and practice and to explore solutions for educational issues (Abodeeb-Gentile et al., 2016; Snow, 2015). Similar to Farrell et al., (2018) the project teams in this study noted benefits such as developing advice networks and continued opportunities for partnerships and involvement in future research projects with partners.

Dimension 2: Research to Inform Action

Participants identified many benefits in engaging in research activities together. Researchers had the opportunity to be immersed in schools to conduct research and practitioners had the opportunity to access research expertise and resources that may not have been available in the school authority. In the eleven interim project reports reviewed as part of this study, the projects were unique with different research questions and different designs, but one commonality was that all project teams engaged in research-practice partnerships with a goal to impact student learning through "producing new knowledge, building capacity, and informing action" (Henrick

et al. 2017). In other words, practitioners and researchers involved in this study were interested in being part of the research-practice partnership if there was a direct connection from the research to possible impacts on student learning in the classroom. Members of the project teams were invested in conducting research that matters in educational settings.

Dimension 3: Convergence Towards Shared Purpose

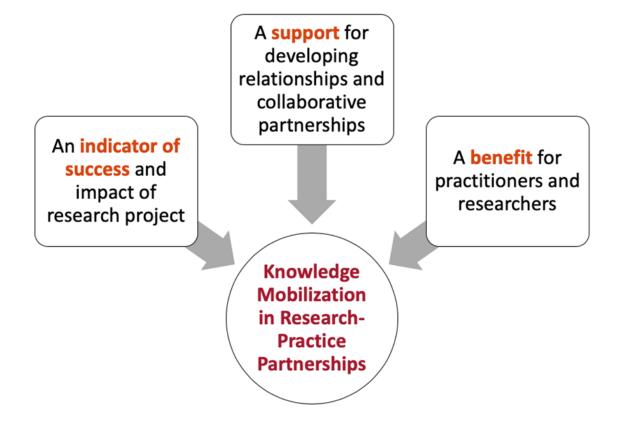
Educational institutions tend to be complex adaptive organizations: "autonomous groups of interconnected agents who share influence, information and knowledge in a far-from equilibrium environment" (Uhl-Bein et al., 2007, p. 166). At the same time, there is a general acceptance that everyone is concertedly working towards realizing common goals. Groups can exhibit characteristics of multiple organizational structures: centralized, decentralized, and networked, as well as various combinations of these. Stakeholders, such as ministries, school authorities, universities, schools, and third-party community organizations connected to any of these systems, are made up of many individuals and formal/informal groups whose goals and behaviors may, at times, seem to conflict. This can make convergence towards a shared purpose challenging when working together in partnership on a research project. In their final reports, four project teams discussed a convergence towards a shared purpose or a coming together of many components. It was important for partners to acknowledge common interests and confirm mutual interests in a short timeframe. Teams with pre-existing relationships may have been at an advantage in converging towards a shared purpose. In four of the completed projects, three teams developed a research plan building on previous work together and one project demonstrated that convergence can occur while building relationships among partners when pre-existing relationships do not exist. Future research could explore the relationship between convergence towards shared purpose and pre-existing/new partner relationships.

Dimension 4: Knowledge Mobilization

Sharing research findings through knowledge mobilization was noted by participants as a benefit in partnering for a research project (see Figure 2). Participants offered four strategies that supported their efforts: having discussions about plans for sharing research together with partners, making planning an ongoing part of the project, preparing presentations and publications for professional and academic audiences, and keeping connected with partners to continue sharing information about the project after the completion of the research. Knowledge mobilization activities were viewed as a support for developing relationships and supporting collaboration among partners. These activities were described as a way to measure impact or success of the project. However, teams also recognized that increasing understanding of how to share research with broader audiences was an aspect of the project that could be strengthened. Perhaps increasing awareness and discussing plans for knowledge mobilization among partners early in the design of the research could be helpful for project teams.

Follow-up with project teams could seek more detail about their plans for using the research and sharing the research with others. Based on the data collected from the teams involved in this study, limited information was provided regarding plans for sharing the research. As such, future research could examine research sharing activities in more depth (i.e., who is involved in presenting at conferences, writing articles, or sharing research at different events or venues over time).

Figure 2
Benefits of Knowledge Mobilization in Research-Practice Partnerships



Dimension 5: Capacity-Building

The capability of any complex system to get things done is a function of its capacity (Davis & Sumara, 2006). One approach to building capacity and increasing knowledge mobilization would be to turn to a complexivist approach as a process for facilitating movement towards a shared purpose. Farrell et al. (2018) discussed one goal for research-practice partnerships is to develop necessary skills and dispositions needed to undertake partnership work. Each partner shares unique skills and dispositions that can contribute to the partnership. For instance, in this study, participants discussed how practitioners were able to identify relevant problems of practice but required support with articulating the problems of practice for research purposes. Likewise, researchers were able to conceptualize a research project but needed to listen carefully to their partners and ask questions to fully understand the problems of practice and to design a mutually beneficial and meaningful research project.

Dimension 6: Dynamics—Ability to Adapt and Cope with Changes and Challenges

Many challenges were noted by the participants. However, despite the issues with the research projects, teams reported how they navigated these unexpected matters and how this resulted in adapting project plans. For example, project teams discussed staff turnover as a problem that delayed research activities and required adjusting timelines or adding new members to the team.

In some cases, members of the team remained with the project even following a job change or move to a distant location. Other teams discussed issues encountered by their participants (i.e., scheduling for data collection, language interpretation, cultural responsiveness, etc.). Collaborating in a research partnership is complex and labour intensive as noted by Phipps and Zanotti (2011) in their discussion about lessons learned from a knowledge mobilization collaboration with York University in Ontario, Canada. Regardless of all the unanticipated challenges, four project teams, who completed final reports at the time of the study, adapted their projects in response to the issues and accomplished their research goals.

Overall, while the findings concur with some of the recommendations from the descriptive study of the Institute of Education Sciences (IES) researcher-practitioner partnerships in education (Farrell et al., 2018)—specifically the importance of reciprocal relationships and the need for flexible funding—they also expand on the need to study and foster the initiation, development, and ongoing support for research-practice partnership projects. The findings also suggest that another dimension could help examine the effectiveness of research-practice partnerships: the ability to adapt and cope with unexpected changes in the research plan. Project team members experienced unanticipated challenges requiring changes to their research plans. It is beyond the scope of this research to determine the specific conditions that supported some project teams to adapt and cope with changes; however, this dynamic could be explored further in future study.

Despite the limitations in gathering perspectives only from the project team members, the findings from this study serve to inform future teams engaging in research-practice partnerships and serve to inform school authorities, research institutions, and the Ministry about the process and nature of multiple stakeholder research partnerships. Findings may also inform scholars and researchers studying or engaging in educational partnerships. Partners need time and flexible structures to develop relationships, conceptualize a research study, and connect with their partner teams. Flexible funding structures are needed to support the pre-work required to establish the research partnership and define research problems. Nurturing relationships to establish research-practice partnerships and time for conceptualizing research are challenges for partners. Further study is needed to understand the inter-connected relationships of the project team members within their respective complex learning systems when engaging in partnership work.

Conclusion

Research-practice partnerships offer a way to engage researchers and practitioners with potential to impact both theory and practice. While previous research has suggested project teams working on research projects involving researcher and practitioner partnerships consider five dimensions for success: (a) build relationships among project team members; (b) conceptualize research to inform action towards improved student learning and consider benefits for partners; (c) take time to work through the challenges involved with converging ideas towards a shared purpose; (d) discuss and negotiate knowledge mobilization plans for a broad range of uses (instrumental, conceptual, symbolic/political, process) throughout the project; and (e) leverage the unique skills and dispositions of all partners to build capacity of team members. As a result of this study, an additional sixth dimension is recommended: expect and plan for unanticipated challenges and changes to make it easier to adapt and cope with the dynamics of research-practice partnerships. Findings from this study indicate there is considerable value in forming such partnerships, funding them and designing a model of support and sustainability for project teams.

Opportunities exist between universities, schools, and community members to connect researchers and practitioners in collaborative research and community engagement where they can work together, learn together, and find ways to positively impact professional and scholarly communities through a range of knowledge mobilization activities.

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Appendix A: Survey

- 1. First and Last Name:
- 2. Email Address:
- 3. Project Name:
- 4. What is your current role?

Question #5-13	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree
I personally feel engaged in research activities through the research partnership.					
I discuss ideas about the research with my partners.					
I consult with my partners about making changes to the research.					
I am involved in the research activities.					
I am involved in knowledge mobilization about this study.					
There are advantages in engaging in research activities with my partners.					
There are challenges in engaging in research activities with my partners.					
My research partnership is working well.					
I am well-supported with this research partnership.					

- 14. Describe how you are assessing or planning to assess the quality of your research partnership.
- 15. Describe how you engaged or plan to engage in knowledge mobilization as part of your research partnership project.
- 16. What are the top three research partnership challenges?
- 17. What are the top three research partnership lessons learned that you would like to share with others?
- 18. Other comments (Is there anything else you would like us to know).

Appendix B: Interview Questions

- 1. Provide an overview of your research partnership. Who are the partners and what brought you together?
- 2. Describe how as a research partner, you engage in research activities and assess the quality of the research partnership?
 - How do you as a research partner conceptualize, design, and enact research?
 - How do you as a research partner engage in knowledge mobilization?
 - How do you as a research partner gauge the success of the research partnership?
- 3. What are your perceptions about working on collaborative research projects focused on improving student outcomes?
 - What are the advantages in engaging in research activities with partners?
 - What are the challenges in engaging in research activities with partners?
 - What worked well in the research partnership?
 - What supports are needed to enhance research partnerships?
 - What are the lessons learned from research partnerships?
 - What artifacts from the research partnership can be shared with others to inform future research partnerships?
 - How do research partnerships inform decisions for practitioners, researchers, and the ministry?
- 4. What are the perceptions of research partners about working together as a cohort (research partners from all of the eleven teams)?
 - What are the advantages in engaging in research activities as a cohort?
 - What are the challenges in engaging in research activities as a cohort?
 - What types of activities conducted with the cohort supported your partnership and research?
- 5. Is there any other information you would like to share with me about your research partnership?