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Mapping roles in research-practice partnerships – a systematic literature review

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ABSTRACT

There is an increasing movement in education towards closer collaboration between researchers and practitioners and research-practice partnerships (RPPs) are seen as one promising approach. However, some challenges still exist. To work in a new collaborative context such as RPPs, researchers and practitioners must adjust their roles in relation to each other. To better inform this movement, we conducted a systematic literature review of 80 articles investigating what roles researchers and practitioners are described to assume in RPPs. The results demonstrate eight different roles for researchers and practitioners, respectively, which reflect variations in both the main processes and tasks for school improvement in RPPs, as well as how these tasks are divided between the participants. Further, based on how tasks are distributed, the different roles provide varying opportunities to pursue a democratisation of evidence.

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Introduction

The twenty-first century has seen several reforms stressing the importance of research as the basis for decision-making in educational contexts (Farley-Ripple et al., 2018). For example, recent government initiatives from the US (Every student succeeds act, 2015), the UK (Department for Education, 2013), Sweden (SFS, 2010:800) and Australia (Education act, 2013) stress the need for education to rest on both research and established experience. There are challenges to integrating research in education, however, as researchers might not produce research that answers educators' most pressing needs (Ion et al., 2018), and educators might not have the resources or time to collect and use research (Vanderlinde & Braak, 2010).

To overcome these challenges, several scholars have argued the need for long-term and mutualistic partnerships between researchers and practitioners, so-called research-practice partnerships (RPPs), as a promising approach to bringing research and practice closer together (Coburn et al., 2013; Coburn & Penuel, 2016; Desimone et al., 2016; Rosenquist et al., 2015). However, promising as RPPs may be, it has been argued

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that creating a successful RPP is also challenging (Henrick et al., 2017; Tseng et al., 2017). The challenges can take many different forms. One example involves relationship-building in a historically unbalanced relationship between researchers and practitioners, while another relates to conducting rigorous research that simultaneously makes an impact and informs practice. To face these challenges, it has been argued that more knowledge is needed regarding theories on which strategies can be utilised to address them (Coburn & Penuel, 2016). Especially, calls have been made for studies investigating *how* researchers and practitioners can work together in RPPs (Coburn et al., 2013; Coburn & Penuel, 2016). For example, for an RPP to succeed in its commitment to school development *and* research, new tasks and roles must likely be assumed; thus, there is a need to further investigate what roles researchers and practitioners could assume in order to avoid confusion and ambiguity regarding each partner's contribution (Farrell et al., 2019).

In this study, we set out to provide a response to these calls by conducting a systematic review of the research literature on RPPs. The aim is to map how the roles of researchers and practitioners are characterised. Moreover, and based on the results, we discuss how different roles for researchers and practitioners may provide different opportunities for engagement between researchers and practitioners in the generation of evidence (i.e. achieving a more democratised evidence system). However, to put this into context for the reader, we will begin by clarifying the concepts and distinctions used in the study in relation to the research-practice gap and to RPPs.

Background

The research-practice gap

To frame our study, we initially need to make some distinctions. The first concerns the actors involved in using research knowledge in education, who traditionally have been divided into two communities: researchers on the one hand, and practitioners (e.g. policy-makers, principals, teachers) on the other (National Research Council, 2012). We recognise that this distinction may simplify complex organisational structures. For example, the professional roles of persons with the same role title (e.g. educational leader) may differ between contexts (Penuel et al., 2017), and the roles of researchers and practitioners may be less distinct than once believed (Newman et al., 2016). However, in line with Farley-Ripple et al. (2018), we argue that the cultures, goals and professional norms in which researchers and practitioners operate differ significantly, and that "a two-communities-driven framework affords the opportunity to both examine the extent and nature of continuing differences as well as reveal contexts in which those differences no longer apply" (p. 237).

Secondly, arguments have been put forth that there exists a gap between research on education and the educational practices themselves (National Research Council, 2012). The gap is a complex problem and has been described to consist of several dimensions (e.g. Farley-Ripple et al., 2018; Wentworth, Khanna, et al., 2021). For example, a *knowledge* dimension entails how knowledge is not shared across these communities; a *design* dimension relates to the different requirements that practitioners and researchers have for research knowledge; and a *context* dimension refers to the problems of transferring research knowledge produced in one context to another.

In order to overcome the research-practice gap, many educational researchers have recently made efforts to conduct research that is both timely and useful to practice organisations (e.g. Penuel et al., 2018; Roderick et al., 2007; Rosenquist et al., 2015). However, conventional methods such as encouraging more rigorous research, better research syntheses, and improved approaches to disseminating research evidence may be insufficient for achieving a high level of research use in education (Finnigan & Daly, 2014). Recently, the creation and establishment of RPPs have been argued to be a promising approach to overcoming the research-practice gap (Coburn & Penuel, 2016). Note that the concept of RPPs has mainly been discussed in the context of the US (Coburn et al., 2013; Welsh, 2021), which may be explained by the country's emphasis on the integration of "what works" evidence into educational practice (Tseng & Nutley, 2014). However, there is of course also interest in initiatives for closer integration of educational research and practice globally, even though the concept of RPP is not explicitly mentioned.[1]

Research-practice partnerships

In this section, we first define RPPs before presenting relevant studies addressing different aspects of RPPs, as for instance research use and researcher and practitioner roles.

Defining research-practice partnerships

RPPs have been defined as long-term systematic efforts conducted between researchers and practitioners in collaboration to improve schools and school systems through research (Farrell et al., 2021). To further define RPPs, Coburn et al. (2013, p. 2) describe them as distinct in five ways. Research-practice partnerships: (1) are long-term, (2) focus on problems of practice, (3) are committed to mutualism, (4) use intentional strategies to foster partnership, and (5) produce original analyses.

Coburn et al. (2013) further divide RPPs into three categories: *Research alliances, Design research*, and *Networked improvement communities (NICs)*. The different kinds of partnerships share many similarities, but also differences in terms of their primary aims. A *Research alliance* can be described as a partnership in which participants aim to investigate (not design) policy and programmes and then funnel the findings back to practice to inform action. *Design research* partnerships, on the other hand, aim to design solutions to problems of practice while at the same time studying and improving these solutions. *NICs* stem from the improvement sciences, and primarily aim not simply to solve a problem of practice but also to improve schools' and districts' capacities to engage in sustained efforts of improvement.

Studies on research-practice partnerships

Even though the concept RPP is quite young (Coburn & Penuel, 2016), the increasing interest in methods for overcoming the research-practice gap has resulted in several studies with different focuses, and that have examined RPPs at different levels of the educational system (e.g. school-, district- and national-level) and with different goals or funding sources.

Some studies focus on increased research use, which is an aim for many RPPs (Desimone et al., 2016). For example, several scholars have argued that RPPs can increase both practitioners' access to and use of research (e.g. Desimone et al., 2016; Tseng

et al., 2017). Empirical evidence from both a literature review (Coburn & Penuel, 2016) and a mixed-methods study with 114 participants (Farrell et al., 2018) also points in this direction. However, at the same time, other empirical studies have found limited (Coburn et al., 2009) or varying (Honig et al., 2014) connections between RPPs and research use.

The connection between research and practice in RPPs is further investigated in research focused on how researchers and practitioners collaborate to achieve their aims (i.e. what roles they assume), and the results and argumentations differ**.** For example, results from one study observing interactions within a partnership (Van Kraayenoord et al., 2011) show that researchers and teachers collaborated and that both contributed with expertise in all three of the identified knowledge categories (classroom and school practices, literacy, and the processes of conducting research in schools). The results from another study (Potvin et al., 2018), on the other hand, showed cases in which the teachers and practitioners supplied knowledge in different areas respectively. Whereas practitioners contributed knowledge on the local classroom context, the researchers supplied knowledge on theories of learning. Moreover, while scholars (e.g. Tseng et al., 2018) have argued that new identities and roles must probably be assumed for the shared commitment of school development and research in collaborative efforts, difficulties in achieving this goal have also been identified. To begin with, Oates and Bignell (2019) have pointed out that practitioners might still feel more comfortable with a more traditional role distribution, with researchers as the experts. In addition, authority relations within organisations might not always be clear, which could prevent successful role negotiations between practitioners and researchers in partnerships (Coburn et al., 2008).

Moreover, recent studies have addressed not only how researchers and practitioners collaborate, but also how this collaboration may be supported. In particular, the role of brokers in partnerships has recently been put in the spotlight (Wentworth, Conaway, et al., 2021). Brokers in RPPs are professionals who work to cultivate relationships between members of research and practice organisations to facilitate research production and use. Results have shown that both researchers and practitioners serve as brokers in RPPs, and that brokers facilitate boundary crossing between research and practice organisations (Hopkins et al., 2019).

Finally, regarding the issue of financing the RPPs, the organisation that supplies the funding is placed in a position of power (Tseng et al., 2017). As a solution, Tseng et al. (2017) argues that RPPs should strive to procure funding from a broader set of foundations to ensure the longevity of funding, which could also work to diminish the authority of the funders and thereby provide greater opportunities for the democratisation of evidence.

Undoubtedly, one of the most pressing challenges for RPPs mentioned in the literature is to create successful collaborations between practitioners and researchers (Coburn & Penuel, 2016). This challenge is of particular importance as partnerships may find it difficult to establish a common focus if clear roles and lines of authority are absent (Penuel et al., 2013). Hence, in order to avoid confusion regarding each partner's contribution, partnerships are explicitly encouraged to address which roles researchers and practitioners should assume (Farrell et al., 2019; Penuel et al., 2013). As a recognition of the need of more knowledge regarding this challenge, studies that gather and structure existing knowledge in order to get a better picture of how researchers and practitioners

can work together in collaborative efforts have been called for (Coburn & Penuel, 2016). In this study, we answer this call by conducting a systematic literature review with the aim of characterising how the respective roles of researchers and practitioners are described in the research literature on RPPs.

Method

Systematic literature reviews can be divided into aggregative and configurative syntheses (Gough et al., 2017). For this review, a configurative approach was deemed the most appropriate for two reasons. Firstly, a configurative approach is in line with our aim to explore and map, rather than evaluate or test, how the roles of practitioner and researchers are characterised in the RPP research literature. Secondly, as the research field of RPPs is quite new, it is important to first map the existing studies to paint a picture of the field before it is possible to aggregate enough evidence and empirical studies of the same kind to get a reliable result.

The review was conducted in four steps: literature search, selection of relevant literature, data extraction, and analysis.

Literature search

The process of finding relevant studies began with an extensive search with the purpose of identifying relevant search terms. The search was conducted in Web of Science, a well-regarded database, with the following search string:

> Ts = (((research* OR academ* OR universit*) NEAR/2 (practi* OR school* OR teacher* OR district*) NEAR/5 (partnership* OR collaborati* OR cooperati*) AND (education or school or teacher)))

This yielded 2,396 studies, which were extracted to VOSviewer – a visualisation software that can be used to visualise the content of abstracts and titles – in order to map the concepts and words used in the studies. From the resulting network visualisation (see Appendix A), relevant concepts were identified as: *research practice partnership, university school partnership,* and *school university partnership*. These were determined to be relevant as they are all directly related to partnerships between research and practice. Other concepts with several hits such as *teacher education* and *interviews,* which were not specifically connected to partnerships between research and practice, were deemed irrelevant to consider as a basis for a search string. Still others, like *cooperation,* are too vague and would result in too many irrelevant hits if included with an "OR" operator. Including them with an "AND" operator would likely not exclude any articles, as the three concepts above are already closely related to cooperation.

The final search was conducted in the databases ERIC, PsycInfo, Scopus, and Web of Science, as these all contain studies performed in an educational context, although not always exclusively. In the final search, the inverse of research practice partnership was included, as were operators to allow for different suffixes. A slightly different search string was used for ERIC, as this database only contains studies in education and as such did not need the end of the string that PsycInfo, Scopus, and Web of Science did,

as this served to eliminate articles not in an educational context. This resulted in the following search string for ERIC:

('research* practi* partnership* OR 'practi* research* partnership*' OR 'school* university* partnership*' OR 'university* school* partnership*')

The following search string was used for PsycInfo, Scopus, and Web of Science:

('research* practi* partnership*' OR 'practi* research* partnership*' OR 'school* university* partnership*' OR 'university* school* partnership*') AND (education* OR school* OR teacher*)

The resulting number of studies for all databases was 1,945 (ERIC 707, PsycInfo 310, WOS 356, and Scopus 572). After these studies were imported into Endnote, all duplicates were eliminated. This left us with 1,220 studies. Of these studies, 45 were judged to be of irrelevant format (i.e. commentaries, book reviews, workshops), as they are not empirical studies but rather report on an event or text. This narrowed the number of studies down to 1,175.

Selection of relevant literature

The next step was to consider the type of studies that could be relevant for achieving our aim of mapping the roles of researchers and practitioner in RPPs (see Appendix B for an illustration of the process). We sought to find studies that contained descriptions of tasks that researchers and practitioners undertook in the partnership. With tasks in RPPs we mean certain actions performed in order to make the RPP move towards its goal, such as collecting, analysing and synthesising data, or providing feedback from implementation.

The standard way to find relevant studies is through the use of inclusion criteria (Gough et al., 2017), which serves to specify the kind of literature to be used in the study. To this end, the first inclusion criterion was that the study had to *be connected to a real-world RPP between practice and academy organisations which are related to K-12 school improvement*. To achieve sufficient transparency on this criterion, an explanation of how partnerships were identified as RPPs is needed. The identification of RPPs was based on the previously mentioned five aspects that distinguish RPPs from other partnerships. Firstly, to be called *long-term*, a partnership needs to be open-ended, and can span from a few years to over a decade. Secondly, to *focus on problems of practice* the partnership needs to focus on solving problems that are considered to be relevant by practice. Thirdly, to *commit to mutualism* the sustained interaction needs to aim to benefit both researchers and practitioners. Fourthly, to *intentionally foster partnerships*, it needs to be evident that partnerships have strategies for how researchers and practitioners will work together. Lastly, producing *original analyses* means that data is analysed to answer research questions posed by practice and not merely making data accessible to practitioners. This criterion was applied to titles and abstracts, and when these did not provide enough information a full-text scan was conducted. Through the criterion, studies describing partnerships that were not RPPs were excluded (e.g. Dunn, 2010; Ervin et al., 2007), as were studies generally discussing RPPs without describing experiences from an existing RPP (e.g. Hooley, 2008; Lefever-Davis & Heller, 2003) as well as those focusing on pre-service teacher education (e.g. Godinho et al., 2007; Kenny et al., 2014). This left us with 511 studies.

A second inclusion criterion was thereafter constructed with the intention of selecting studies *most likely* to contain descriptions of tasks undertaken by researchers and practitioners in the RPP, as this would serve as the basis for the analysis of roles. This criterion entailed selecting *studies having the whole of RPP as the object of study, often case studies*. The criterion was applied to titles and abstracts, and when these did not provide enough information a full-text scan was conducted. This resulted in the exclusion of studies that focused on minor subsets of RPPs (e.g. Hipkins & McDowall, 2013; Van Kannel-Ray et al., 2008), such as interview studies of practitioners' experiences of professional development (PD) programmes (Kershner et al., 2013), as well as studies that mainly described RPP outcomes (e.g. Aydin et al., 2018; Foy, 2009). This left us with 215 studies.

Finally, we decided to exclude grey literature (e.g. book chapters and theses). The main argument for including grey literature in a review is that it might reduce evidence bias, as a source of null or negative results might be harder to publish in research journals (Paez, 2017). However, as this review does not focus on results but rather on descriptions of how researchers and practitioners work together in RPPs, this was not a major issue. This limited the number of whole text scans to 174.

When scanning full-text articles, a third criterion entailed including *all articles with descriptions of the different tasks in the RPP undertaken by researchers and practitioners*. This excluded 82 articles. Excluded articles were those that, for example, focused on benefits and barriers without providing enough description of how the work was distributed (e.g. Martin & Groff, 2011), mainly described how the RPP was initiated (e.g. Dodman et al., 2014), or did not provide a description of further RPP tasks (e.g. Stevens & Everhart, 2000). The articles exemplified above had insufficient descriptions for analysing roles as they did not specify what tasks researchers and practitioners were responsible for in respective partnership. This left us with 92 articles.

Data extraction

In the data extraction phase, we read the papers included in our final sample and extracted information on (a) their characteristics and context, such as year of publication, country and school level, and (b) descriptions of roles. In the data extraction process another 12 articles were excluded, as we either realised that there was insufficient description of tasks (e.g. Muñoz, 2016) or that the same authors described the same partnership in other articles while not contributing anything more than the article included (e.g. Gifford & Gabelko, 1987a, 1987b). This left us with 80 articles.

A brief summary of the characteristics and context of the 80 studies show that 65% of studies were published in the last decade (2010–2019), while the oldest studies were published in 1986. Moreover, only 10% of the studies were conducted outside the US, including studies from the UK ($n = 2$), Canada ($n = 1$), and countries in the South Pacific ($n = 5$).

Analysis

In the last phase, we analysed the articles' information on roles in the described partnerships. The analysis was based on descriptions of how tasks are divided between practitioners and researchers in RPPs, as well as the main processes utilised to facilitate

school development (e.g. inquiry to extend knowledge and inform practice). The key to finding the different roles, then, was to first find the different tasks in the literature and to then identify how they were divided between researchers and practitioners.

The analysis process was based on open coding, which is common in configurative reviews (Gough et al., 2017). Open coding means that, with few predefined concepts going into the analysis, the task is instead to construct a new framework based on the reviewed literature. The process of coding in configurative syntheses is typically iterative, going back and forth between the aim of our study and the literature to be reviewed (Gough et al., 2017).

A majority of coding work consisted of analysing and categorising tasks and how they were distributed between researchers and practitioners. Hence, with open coding as the basis for our analysis, the following steps were taken. First, we identified tasks described in the articles. This meant underlining all passages describing tasks. Some of the tasks were found to be of no use in relation to our aim of categorising roles. For instance, the task "procuring funding" was deleted as it was described as a purely administrative task not directly linked to the work of school development (although it could be an important supporting factor). Other tasks (e.g. deciding partnership aims, building relationships with other participants) were not decisive for our categorisation as both researchers and practitioners were extensively engaged in these tasks in all partnerships where they were described. As these tasks did not aid us in differentiating between role categories they were excluded from the results. The remaining tasks were those deemed important for forming role categories, for example: collecting, analysing, and synthesising data, adapting designs to local contexts, providing feedback from implementation, recommending actions for practice, and facilitating sharing of knowledge.

When relevant tasks had been identified, we started distributing these tasks between researchers and practitioners in order to find similarities and distinctions across partnerships to create initial categories. Finally, we compared these categories and related tasks to the review articles to see how they fit. These steps were repeated until the categories were saturated and sufficiently stable to hold against the data set. The most important tasks and how they relate to role categories are summarised in Table 1 (see the results section).

The first author was lead analyst, receiving assistance from the other authors, and the described iterative process of coding served to increase the reliability of the study in terms of stability (cf. Weber, 1990). In other words, after several iterations of coding, the classification of roles was invariant over time. Moreover, to further increase the reliability in terms of reproducibility (i.e. the extent to which different coders produce the same results when coding; Weber, 1990), the coding and classification done by the first author was continuously discussed with the other authors between every cycle of coding.

During the analysis it became apparent that some partnerships held several tasks in common, and we noted a connection to the three previously mentioned categories of RPPs: research alliances, design research, and NICs. In line with this, our RPP categories are based on the grouping of roles that revolved around the same main process of collaborative school development, with an initial framework provided by Coburn et al. (2013). The reason we focus on the main process of school development when grouping roles in different forms of partnership is that roles are generally assumed in relation to a work process. Note, however, that our categories are generally more inclusive than those

Table 1. Description of tasks as a basis for role categories.

Main process	Researcher roles (R)	Practitioner roles (*P*)	Number of articles
Inquiry	**Expert inquirers** Collect, analyse, and synthesise data. Inform practice.	**Inquiry translators** Keep inquiry relevant to practice, as well as translating knowledge into action.	**3**
	Co-inquirers Collaborate with practitioners at all stages, such as defining research questions; collecting, analysing, and synthesising data; and translating into practice.	**Co-inquirers** Collaborate with researchers at all stages, such as defining research questions; collecting, analysing, and synthesising data; and translating into practice.	**7**
	Inquiry facilitators Support practitioners' inquiry by supplying knowledge on research methodology.	**Inquirers** Conduct most of the inquiry work, such as collecting and analysing data.	**15**
Design	**Designer leaders** Lead initial co-design. Collect data, analyse and redesign.	**Designer pilots** Support initial co-design. Provide input from practice on redesign. Adapt design to local context.	**9**
	Design advisors Initial co-design. Collect and analyse data, and recommend actions.	**Design validators** Initial co-design. Interpret initial design, give feedback on implementation, and translate recommendations into local context.	**8**
Dissemination	**Disseminators** Provide PD to practitioners. Facilitate discussion among practitioners.	**Translators** Translate and test theory in practice.	**8**
	Content disseminators Provide content knowledge to practitioners in collaboration.	**Teaching disseminators** Provide practical knowledge of teaching to researchers in collaboration.	**4**
	Facilitators Facilitate sharing of practical knowledge among practitioners in a local group. Also share knowledge from one local group of practitioners to another.	**Knowledge sharers** Discuss and share knowledge from practice.	**6**

Note: Details of the references in each category are given in Appendix C.

proposed by Coburn et al. (2013). While Coburn et al. (2013) supply extensive description of the properties required of partnerships to be labelled within their respective categories, our categories are mainly based around the main process for school development. If a partnership related to one of these, and fulfilled the criteria for RPPs mentioned earlier, it was included in our study.

Ultimately, we found three main processes for school development in relation to which roles were assumed. Firstly, when researchers and practitioners mainly work together on an investigation aiming to extend knowledge on a problem of practice it is called *inquiry*, which is similar to research alliances as it is usually connected to investigating questions of practice as a basis for school development. However, when positioned as co-inquirers, researchers and practitioners collaborate beyond what is described for research alliances. Secondly, when researchers and practitioners mainly work together on a design for a solution to a problem of practice as a basis for school development it is called *design*, which is very similar, if not identical, to design research. In contrast to partnerships based on inquiry, design partnerships focus more on designing a solution than on investigating a problem of practice. Thirdly, when researchers and practitioners mainly work together

to share knowledge and expertise it is called *dissemination*, which along with NICs utilises an intentional structure for sharing experience and expertise to facilitate school development. They differ, however, in the sense that NICs have a stricter definition of engaging several districts in combined efforts of rapid design, testing, and redesign, which is not a requirement for being called a dissemination partnership. NICs can be seen as a subcategory of dissemination partnerships. For example, some partnerships in the reviewed articles (e.g. Nelson, 2005) focus on the sharing of expertise between a pair of individuals benefiting from each other. Such partnerships can be called dissemination partnerships but not NICs, as they have an intentional structure for sharing expertise but do not have the element of rapid design, testing, and redesign as described for NICs.

As part of the three main processes above (i.e. the main activity/process that facilitated school improvement) there were several related tasks such as supplying and disseminating knowledge, analysing and synthesising data, and testing and giving feedback on designs, which was the foundation for categorising roles. We considered researcher and practitioner roles to be assumed in relation to each other. This means that one researcher role and one practitioner role together constitute one role category. Note that some articles included descriptions of more than one role category (we call these *multifaceted partnerships*). For example, some partnerships included several separate projects in which researchers and practitioners had different roles, depending on which project they participated in (e.g. Firestone & Fisler, 2002). Note, however, that all the separate roles within the multifaceted partnerships were also found in the remaining simple faceted partnerships. Therefore, for the clarity of the article, we choose to exclude the multifaceted partnerships in the article count in the results section, because the same article would then need to be counted several times. The following *Results* section presents different researcher and practitioner roles connected to the three partnership categories based on the main processes.

Results

Our characterisation of researchers' and practitioners' roles in RPPs is based on what tasks they are described as performing within the partnerships studied in the analysed articles. In Table 1, an overview of the identified role categories, and their respective tasks, is presented and sorted into the three main processes of school development.

The sections that follow discuss each role in depth, providing quotes and paraphrases that illustrate how the roles are described in research literature. We follow the structure presented in Table 1, and summarise when all roles that relate to the same main process have been described. As previously discussed, multifaceted partnerships could not be placed in a single category and were therefore excluded from the number count in Table 1. Because of this the sum of articles is 60 rather than 80**.** Despite this, though, the numbers serve as an adequate representation of how the role categories are approximately represented in the literature.

Inquiry partnerships

In inquiry partnerships, researchers and practitioners mainly work together on an investigation with the aim of extending knowledge on a problem of practice.

Researchers as expert inquirers – practitioners as inquiry translators

In the research literature we find studies that portray researchers as expert inquirers, which means that they are responsible for two tasks: firstly, the analysis and synthesis of data are the task of the researcher; secondly, researchers share findings with practitioners. For example, in the partnership described by Rimm-Kaufman et al. (2018), researchers were tasked with data collection and then synthesised the data to share results with superintendents and the foundation that funded the partnership. In relation to researchers as expert inquirers, we also find practitioners' role as inquiry translators, which can be divided into two parts. Firstly, the task to keep the inquiry relevant to practice is illustrated in the quote below:

> The fifth step involved engaging district leaders and community members in a process of reflection on the data, with the goal of honing in on key community problems. (Rimm-Kaufman et al., 2018, p. 108)

Secondly, practitioners translate findings into action in local contexts:

> During these briefings, researchers present key takeaways of the study, provide relevant handouts (e.g. one-page data analyses for each community school), and pose discussion questions known as *Considerations for Practice* to stimulate dialogue about how findings may be used for action. (Biag, 2017, p. 15)

Researchers and practitioners as co-inquirers

In contrast to the roles described above, with researchers undertaking most of the inquiry work, here, researchers and practitioners collaborate as co-inquirers on all tasks of inquiry and hence extend their collaboration. Some key tasks that they collaborate on are defining aims and method, as well as analysing and synthesising data (e.g. Campbell et al., 2019; Kirschner et al., 1996; Nur, 1986). The roles are not identical, however; practitioners are described as playing a greater part in collecting data, while researchers supply expertise in research methodology. The quotes below illustrate the roles of researchers and practitioners as co-inquirers in two collaborative components:

> Two collaborative research components were designed to contribute to teachers' professional development. First was a systematic collection of teacher-generated critical incidents that represented positive or facilitative aspects of inclusion and problem-oriented or challenging aspects of inclusion. Second, a series of collaborative meetings for joint analysis of critical incidents by researchers and teachers were held. For the first component, the teachers' role was to gather meaningful data about their classrooms; their role for the second component was to interpret or make sense of the data. (Gettinger et al., 1999, p. 259)

> During the meetings, researchers guided teachers' thinking about CIs [Critical Incidents] by providing step-by-step methods to help them engage in a qualitative analysis of CI data. (Gettinger et al., 1999, p. 261)

The management of data is also the main change as we move to the next category of roles.

Researchers as inquiry facilitators – practitioners as inquirers

Practitioners are positioned as inquirers when they have more responsibility for inquiry tasks (e.g. Garin et al., 2015; McLaughlin, 2007). Comparing this category of

roles to the two discussed above, practitioners conduct data collection, analysis, and synthesis largely on their own, with support from researchers in how to perform these tasks. The researchers act as inquiry facilitators by supplying knowledge on methodology. With slight variations, of course, partnerships in this category hold similar tasks as *researchers and practitioners as co-inquirers*, with researchers in some way facilitating and aiding teachers in their inquiry (as it is often seen as the teacher's inquiry rather than the researcher's). As an example, one partnership (Stoddard et al., 1996) framed its inquiry in teacher research projects, which was supported by the academics through providing time (substitute teachers) and expertise on research methodology. Another (Garin et al., 2015) used action research methodology and teacher inquiry groups to frame its inquiry work. In yet another partnership (McLaughlin, 2007), the teachers determined the research questions they wanted to address, and received support from the researchers in how to best go about answering them. The practitioners then conducted the research and translated the findings into action.

Summary

All three role categories discussed above collaborate on inquiry in order to investigate problems of practice. The main variation across the categories involved how the management of data was distributed between researchers and practitioners. From the first to the third category, practitioner responsibility for tasks (primarily data analysis and synthesis) increases and researcher responsibility decreases.

Design partnerships

In contrast to partnerships based on inquiry, design partnerships focus more on designing a solution to a problem of practice than merely extending the understanding of practice. In design partnerships, researchers and practitioners work on a design in two phases: initial and iterative.

Researchers as design leaders – practitioners as designer pilots

In the first category of roles for design partnerships (e.g. Johnson et al., 2016; Russell et al., 2017), the initial phase consists of co-design, which in the iterative phase is followed by iterations of feedback from practice, and analysis and synthesis by the researchers. The synthesis then serves as a basis for collaborative redesign:

> The year was marked by two distinct phases: (1) a cooperative effort by district leaders and researchers to define a set of task quality criteria aligned to the goals of the CCSSM **[Common Core State Standards for Mathematics]** and attentive to the needs of students for whom English was not their primary language, and (2) iterations of co-design with all stakeholders in which teachers enacted the task analysis routine and provided feedback about its use. (Johnson et al., 2016, p. 171)

The researchers lead design work by analysing and synthesising the data collected from the teachers. The practitioners both advise and collaborate on design efforts, but also serve as test pilots for the design in relation to educational practice.

Researchers as design advisors – practitioners as design validators

The roles that the practitioners and researchers assume in this category are similar to those in the one above, and also relate to a design process (e.g. Cannata et al., 2017; Rosenquist et al., 2015). In the first phase of design, the practitioners and researchers collaborate on an initial design, much like the previous category, *researchers as design leaders – practitioners as designer pilots*. The difference lies in the iterative second phase, in which recommendations for practice follow the feedback supplied by practitioners, instead of a collaborative design effort. The recommendations for practice are why the researchers are categorised as advisors rather than leaders. The practitioners are positioned as validators, as they are tasked with adapting the researchers' recommendations for design changes to local practice. This is described by Rosenquist et al. (2015) as follows:

> The first component is addressed through the district feedback and recommendation cycle, which we use to provide our districts with timely and empirically based feedback and recommendations to inform their planning for the upcoming year. (pp. 47–48)

Summary

The two role categories discussed above collaborate on designing a solution to a problem identified by practice. Similar to inquiry role categories, design role categories are characterised by increasing responsibility for tasks for practitioners and decreasing for researchers. However, this time it relates to how tasks are distributed in regard to initial co-design and the adaption of design to local practice.

Dissemination partnerships

In dissemination partnerships, both researchers and practitioners seek to share knowledge and expertise in order to facilitate school improvement. While inquiry and design partnerships also seek to share knowledge and expertise to some extent, the difference is that dissemination partnerships leverage sharing or dissemination between participants as the main process for school development.

Researchers as disseminators – practitioners as translators

In the literature we found that in some partnerships the researchers are portrayed as disseminators (e.g. Borda et al., 2018; Israel et al., 2017) based on one major point, namely that they provide PD and are hence seen as disseminating research knowledge to the practitioners. Initially, however, the aims of the partnership are collaboratively defined, sometimes with the support of a needs assessment (e.g. Israel et al., 2017). Then, after receiving PD from the researchers, the practitioners engage in local discussions to translate this PD into something that directly affects practice and to further spread knowledge. This positions practitioners in a role as translators:

> Therefore, TWSSP professional development combined week-long Summer Academies with academic-year Saturday workshops and regular Professional Learning Community (PLC) meetings. During Summer Academies, teachers spent roughly half of their time gaining mastery of disciplinary concepts and skills in domain-specific content immersion sessions and the other half of their time together in pedagogy sessions, developing common understandings of best practices in teaching and learning. (Borda et al., 2018, p. 47)

The phases described above are then repeated as the researchers and practitioners collaboratively define another aim, either based simply on discussions between the two groups or, as some did (e.g. Israel et al., 2017), with support from data from a needs assessment.

Researchers as content disseminators – practitioners as teaching disseminators

In contrast to the role category discussed above, some RPPs in the literature (e.g. Nelson, 2005; O'Sullivan et al., 1999) pair individual researchers and practitioners who complement each other, the researchers knowing more about the subject content delivered and the practitioners knowing more about teaching practices. The major difference to the previous category of roles is that both practitioners and researchers are positioned as experts, complementing their respective partner's knowledge. The mutual benefit of the other's expertise is illustrated below:

> The stated goals of the project were to deepen teachers' disciplinary understandings, support teachers in shifting to inquiry-based practice, help fellows become effective science educators, and increase fellows' understandings of public education. In the context of these goals, the fellows were conceived as novice science educators with extensive disciplinary knowledge. The middle school teachers were viewed as more or less experienced science educators who, for a range of complex reasons, might not have a strong foundation in all the scientific areas they found themselves teaching (Czerniak & Chiarelott, 1991). Given these goals and assumptions, it was reasonable to view the partnerships as professional-development opportunities grounded in the differing areas of expertise of each partner. (Nelson, 2005, pp. 383–384)

Researchers as facilitators – practitioners as knowledge sharers

In this category, the aims are initially co-defined. However, in contrast to the roles described above, some RPPs in the literature (e.g. Dichele, 2016; Thompson et al., 2019) position practitioners as the holders of knowledge to be shared (instead of researchers), at the same time as they are also the end receivers of this knowledge. This duality is why they are positioned as knowledge sharers, capturing the dual meaning of *sharer* as both giving and receiving instead of taking on the role of disseminator. Researchers are then positioned as facilitators, spreading and structuring practitioner knowledge, and while the academic knowledge they provide still plays a part, their main task is facilitating. This category can be described in three phases. The first phase of the collaboration is co-developing aims. The second phase involves the researchers supporting practitioner professional learning communities (PLCs), in which the practitioners are the main contributors of experience and expertise. In the third phase, the researchers share learning across groups of practitioners, which underlines the researchers' position as facilitators. For example, in one partnership (Thompson et al., 2019) the researchers shared promising tools and practices between PLCs in a network.

Summary

The above presentation of role categories is also characterised by an increasing level of task responsibility for practitioners and a decreasing level of task responsibility for researchers. In this case, the shift primarily involved who was perceived as the one holding knowledge to be shared or disseminated.

Discussion

Our results show that the roles of researchers and practitioners in RPPs greatly differ, depending on both the main process of school development in the described RPP as well as how the researchers and practitioners are positioned in relation to each other. In this section we will discuss these results and their implications, but first we acknowledge that the results must be interpreted in light of the study's limitations.

Limitations

The results of this study should be interpreted with respect to its limitations. Firstly, we recognise that the results are based on the article authors' descriptions of RPP tasks. These descriptions may be "glorified" in the sense that the collaboration is exaggerated. A way to complement and validate this study's results would be to get first-hand data through observations of the collaborative components of RPPs.

Secondly, our binary division of roles (researchers and practitioners) in RPPs may not fully capture the complex organisations in which both systems operate (Newman et al., 2016; Penuel et al., 2017). There are several different formal roles within the categories of practice (principal, teacher, district office personnel, etc.) as well as research organisations (professors, post-docs, doctoral students, etc.). Future studies might want to address this by investigating how these different formal roles relate to informal roles (as described in this article) in RPPs.

Thirdly, while the previously described steps taken to enhance reliability also enhance internal validity, there are elements of the study that should be discussed relating to external validity (cf. Weber, 1990). More specifically, the concept of RPP is largely situated in the US, and 90% of the studies included in the final analysis are situated in that context. This is important to note as the US is known for taking a top-down and "what works" approach to integrating research evidence into practice, which does not apply to all countries, and as such constitutes what can be called a "special case" (Tseng & Nutley, 2014). Hence, conclusions about roles of practitioners and researchers in RPPs presented can mainly be considered accurate in relation to that context. Further research on roles in RPPs situated in another context than the US is therefore needed, as the context in which educational interventions are conducted may affect their design and outcomes (Century & Cassata, 2016; Ryve & Hemmi, 2019).

Discussion of results

Review studies of educational interventions, whether it may concern teachers' use of curriculum materials (Remillard, 2005), data use in education (Prøitz et al., 2017), or teacher professional development programmes (Lindvall & Ryve, 2019), have shown that teachers are often assumed to take the role of implementers of the reforms. As such, researchers, curriculum makers or PD providers are also seen as the ones holding the evidence of "what works" in the educational settings. The emphasis and priority on "what works" research can also be seen in structures such as what works clearinghouse (What Works Clearinghouse, 2020) in the US and the Education Endowment Foundation (Edovald & Nevill, 2021) in the UK, and specific large-scale initiatives following a "what works"

approach, such as the Visible Learning project (Hattie, 2012), or the University of Chicago school mathematics project (Leslie, 2011). RPPs, on the other hand, are constructed to promote a more even distribution of authority in the creation of educational evidence (Tseng et al., 2018), which, in turn, is argued to lead to research that is more relevant to practice (Penuel et al., 2020; Tseng et al., 2017). The results from this review indicate that this goal is partly fulfilled. In contrast to other types of educational reforms (e.g. introduction of curriculum materials, data-use in education, teacher professional development programmes), in RPPs, it is equally common to place practitioners in positions with high degrees of autonomy as with low degree of autonomy.

The above results are important considering that one of the main goals of RPPs is to achieve a more democratised evidence system (Tseng et al., 2018). Such a system has been argued to " … facilitate ongoing seamless engagement between researchers, practitioners, and policymakers around research, data, expertise, and experience" (Tseng et al., 2018, p. 12). But, to avoid confusion and ambiguity regarding the contribution of respective participants, roles and responsibilities need to be explicitly addressed (Farrell et al., 2019). The three forms of RPPs and their different role categories presented in this study can aid partnerships in addressing this ambiguity and progress towards different paths for a more democratic evidence system.

At the same time, note that our results demonstrate that the different role categories vary in the degree of involvement and tasks of practitioners and researchers, respectively, which may lead to different opportunities for the democratisation of evidence. For instance, the role categories *(R) expert inquirers – (P) inquiry translators*, *(R) designer leaders – (P) designer pilots*, and *(R) disseminators – (P) translators* have a more traditional distribution of tasks and responsibilities, with the research led by researchers and then shared with practitioners for utilisation in supporting school improvement (Penuel et al., 2020). These kinds of roles may make it harder to democratise evidence, as the knowledge generation and dissemination are still primarily the researcher's responsibility. Similarly, the role categories *(R) inquiry facilitators – (P) inquirers* and *(R) facilitators – (P) knowledge sharers* also have an uneven distribution of tasks, but here the distribution of tasks between researchers and practitioners is the reverse. In these categories researchers mostly facilitate and guide practitioners who, on the other hand, are responsible for a majority of the tasks and decisions. However, while the facilitator role includes limited task responsibility, it plays an essential part in the research and practice nexus, similar to the role of brokers (Wentworth, Conaway, et al., 2021). Facilitators may function as a link between the research and practice organisation, as they organise school improvement and research work.

Finally, the role categories *(R)(P) co-inquirers*, *(R) design advisors – (P) design validators*, and *(R) content disseminators – (P) teaching disseminators* have a more even distribution of tasks and responsibilities. In these categories, practitioners and researchers work on more equal terms compared to the other categories, as tasks are quite evenly distributed. Hence, the role categories identified in this study can be described as having different degrees of evidence democratisation, with those having the most equal distribution of tasks arguably being the most democratised.

Our results suggest that different role categories may vary in terms of how and to what degree they democratise evidence. However, in relation to more traditional research, we argue that they all represent a step towards closer collaboration between researchers and practitioners, and a more equal evidence system. To this end, we believe that our

categories of the roles researchers and practitioners can assume in RPPs can help partners find ways to collaborate that suit partnerships with different compositions of researchers and practitioners as well as in a wide variety of contexts. For instance, based on the fact that specific competences of certain researchers and practitioners vary, the roles that researchers and practitioners assume should also vary across RPPs. This takes us back to Table 1, which illustrates many different roles that researchers and practitioners can take on, with varying distributions of tasks between them. For instance, the BRIDGE partnership described by Gettinger et al. (1999) has the dual aims of investigating a problem of practice while also enhancing the capacity of practitioners' engagement in inquiry. Hence, the role category *(R) expert inquirers – (P) translators*, which does not include practitioners in engagement with data, will not serve the partnership's aims as closely as will *(R)(P) co-inquirers* or *(R) inquiry facilitators – (P) inquirers*. However, in a partnership described by Rimm-Kaufman et al. (2018), which solely focuses on the investigation of problems of practice, it might be more time-efficient for researchers to conduct and analyse data, as such tasks are embedded in their profession.

Another important dimension related to the discussion on the democratisation of evidence is whether tasks are divided between researchers and practitioners or worked on collaboratively. It could be argued that evidence generation is relatively democratised if tasks are evenly distributed between researchers and practitioners. In partnerships characterised by a distribution of tasks, researchers or practitioners perform their respective tasks and then inform the other and discuss how to proceed. However, another way to generate evidence on equal terms is to actively collaborate on the different tasks that constitute these partnerships. Most role categories seem to rely more on distributing tasks than on actively collaborating on them. However, some partnerships tend to begin with active collaboration. For example, in the category *(R) design advisors – (P) design validators*, researchers and practitioners actively collaborate on an initial design. Another partnership category, *(R)(P) co-inquirers*, is characterised by active collaboration on tasks throughout all partnership stages, collaborating on tasks like the analysis and synthesis of data. This is another dimension that needs to be considered when structuring partnership work. More collaborative work will likely require more time of participants as more people get involved in more tasks, but could also enable a closer integration of researchers' and practitioners' ideas and expertise.

Conclusion

In this study we have mapped and identified different roles assumed by researchers and practitioners in RPPs. This is one contribution to answering calls for further knowledge on how partnerships may work to achieve their goals and thereby help structure new RPPs and help improve existing ones (Coburn & Penuel, 2016). For example, researchers and practitioners looking to start a new partnership may use the results to choose forms of collaboration that suit the local context. Moreover, not only the role categories but also the three different forms of RPPs can aid new and existing partnerships in reflecting on what collaborative main processes best serve school development and research in relation to the aim and context of their particular partnership.

The categorisation of roles and forms of RPPs may also serve as a starting point for the additional building of theory concerning the positioning of researchers and practitioners

in educational reforms. However, more work is needed. Firstly, in line with Coburn and Penuel (2016), we call for empirical studies to investigate connections between RPP strategies and outcomes. For example, which role structures lead to certain outcomes? Secondly, we need further investigations into what we call *multifaceted partnerships*. These partnerships typically have a large and complex organisational structure, with many elements that foster research and school improvement. Thirdly, our results show that there was a relatively large spread in roles for the different RPPs described in the article. What may cause this spread is beyond the scope of this paper. However, future studies are recommended to investigate if certain features of the RPPs contribute to a certain division of roles becoming more likely. For example, how would different funding options map against the categories of roles, or are some RPP aims more closely linked to a certain division of roles than others?

As the interest and investment in partnerships between research and practice increase, so must the research efforts regarding such structures. With this study, we have supplied a categorisation of roles in RPPs and RPP forms which can be further built on in order to progress theory and practice.

Note

1. For instance, the Education Endowment Foundation (EEF) is an effort to introduce a "what works" approach in the UK context similar to the efforts of the US (Tseng & Nutley, 2014). Another example is the Pacific Literacy and School Leadership Program (PLSLP; Jesson & Spratt, 2017) including several pacific countries.

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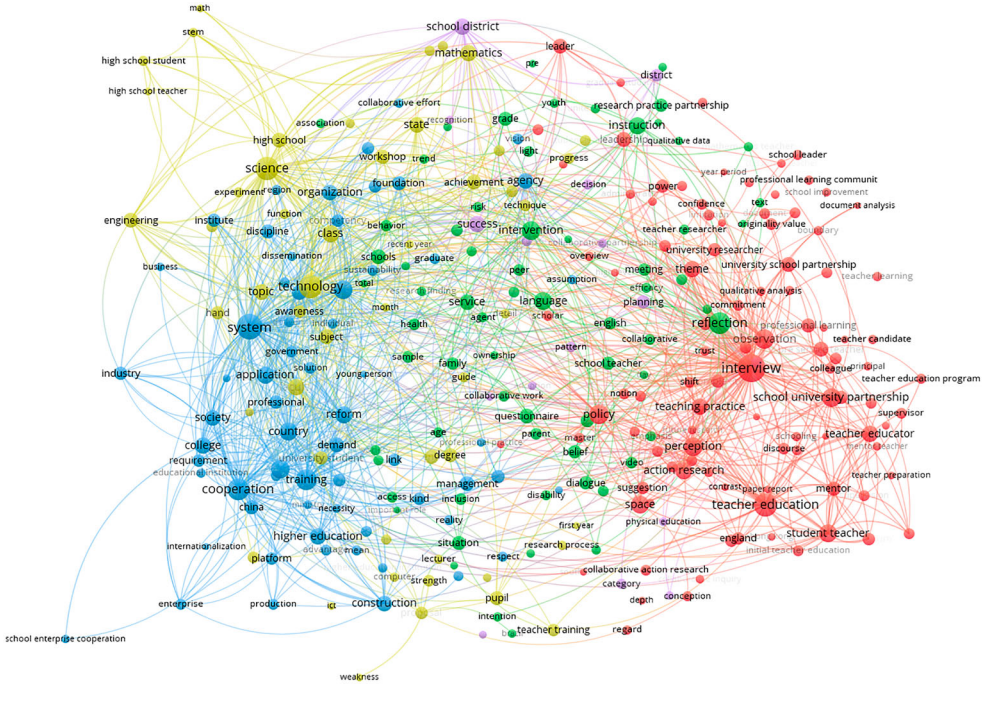
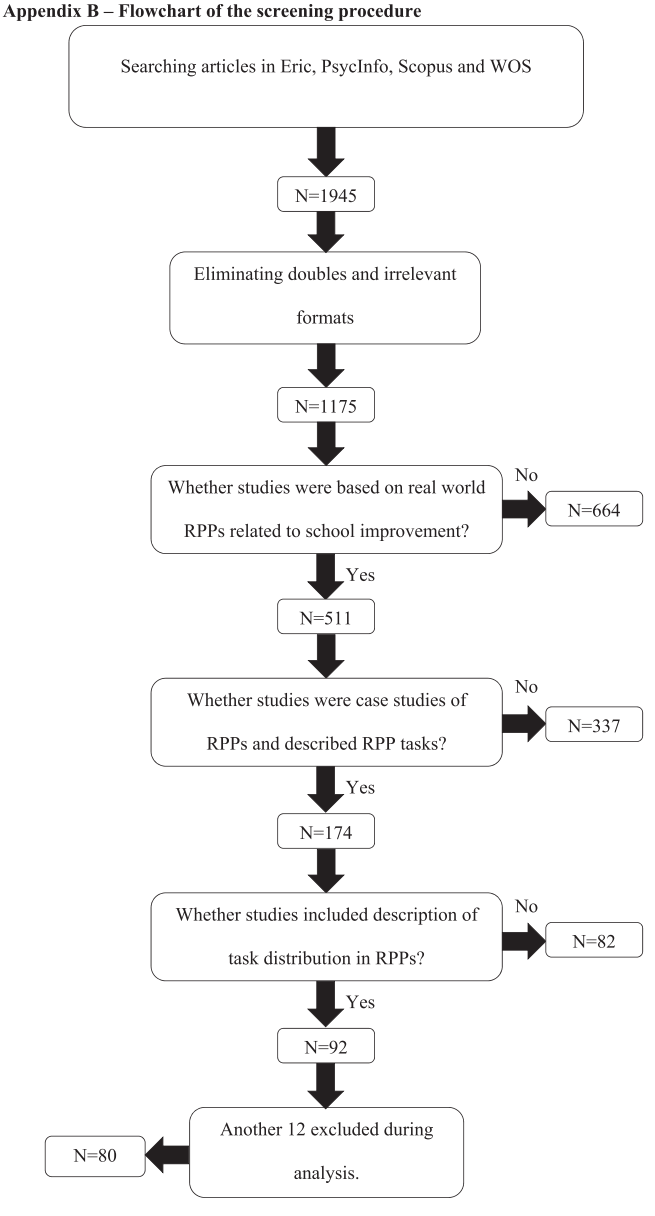
Appendices

Appendix A – Network visualisation of concepts in titles and abstracts



Appendix B – Flowchart of the screening procedure



Appendix C – Description of tasks as a basis for role categories including references per category.

Main process	Researcher roles (R)	Practitioner roles (P)	Number of articles	Articles
Inquiry	Expert inquirers Collect, analyse, and synthesise data. Inform practice.	Inquiry translators Keep inquiry relevant to practice, as well as translating knowledge into action.	3	(Biag, 2017) (Raia-Hawrylak et al., 2019) (Rimm-Kaufman et al., 2018)
	Co-inquirers Collaborate with practitioners at all stages, such as defining research questions; collecting, analysing, and synthesising data; and translating into practice.	Co-inquirers Collaborate with researchers at all stages, such as defining research questions; collecting, analysing, and synthesising data; and translating into practice.	7	(Campbell et al., 2019) (Cicchelli & Baecher, 1993) (Dennis et al., 2015) (Gettinger et al., 1999) (Goldstein et al., 2019) (Kirschner et al., 1996) (Nur, 1986)
	Inquiry facilitators Support practitioners' inquiry by supplying knowledge on research methodology.	Inquirers Conduct most of the inquiry work, such as collecting and analysing data.	15	(Ancess et al., 2007) (Arhar et al., 2013) (Baharav & Newman, 2019) (Beckett, 2014) (Betlem et al., 2019) (Cooney et al., 1997) (Crawford et al., 2008) (Garin et al., 2015) (McLaughlin, 2007) (Patrizio, 2013) (Schlessinger & Oyler, 2015) (Steel et al., 2012) (Stoddard et al., 1996) (Warren & Peel, 2005) (Wilcox et al., 2017)
Design	Designer leaders Lead initial co-design. Collect data, analyse and redesign.	Designer pilots Support initial co-design. Provide input from practice on redesign. Adapt design to local context.	9	(Benenson et al., 2012) (Farrell et al., 2019) (Hudson et al., 2012) (Jesson & Spratt, 2017) (Johnson et al., 2016) (Klar et al., 2018)

(*Continued*)

Continued.

Main process	Researcher roles (R)	Practitioner roles (P)	Number of articles	Articles
				(Penuel & Watkins, 2019) (Russell et al., 2017) (Singh & Glasswell, 2013)
	Design advisors Initial co-design. Collect and analyse data, and recommend actions.	Design validators Initial co-design. Interpret initial design, give feedback on implementation, and translate recommendations into local context.	8	(Blazar & Kraft, 2019) (Blue & Collins, 1998) (Cannata et al., 2017) (Falk et al., 2016) (Harrison et al., 2019) (Hindman et al., 2015) (Neville, 2010) (Rosenquist et al., 2015)
Dissemination	Disseminators Provide PD to practitioners. Facilitate discussion among practitioners.	Translators Translate and test theory in practice.	8	(Borda et al., 2018) (Erskine-Cullen, 1995) (Evans et al., 2012) (Hirsch et al., 2018) (Israel et al., 2017) (Leslie, 2011) (Osler et al., 2012) (Siers et al., 2015)
	Content disseminators Provide content knowledge to practitioners in collaboration.	Teaching disseminators Provide practical knowledge of teaching to researchers in collaboration.	4	(Beaty-O'Ferrall & Johnson, 2010) (Kamler et al., 2009) (Nelson, 2005) (O'Sullivan et al., 1999)
	Facilitators Facilitate sharing of practical knowledge among practitioners in a local group. Also share knowledge from one local group of practitioners to another.	Knowledge sharers Discuss and share knowledge from practice.	6	(Dichele, 2016) (Johnson & Rakestraw, 2013) (Le Cornu & Peters, 2009) (Muchmore et al., 2004) (Post & Lubeck, 2000) (Thompson et al., 2019)