Article

Creating Transformative Research–Practice Partnership in Collaboration with School, City, and University Actors

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Abstract: Traditional educational research has been criticized for the gap between the research and practice communities, meaning that outcomes do not transfer to educational praxis. To meet this challenge, policymakers, funders, and researchers are developing research–practice partnerships (RPPs). The purpose of this research is to study the research–practice partnership as a strategy for educational transformation in the Finnish educational context. This study highlights the multifaceted perspectives of key RPP stakeholders: teachers, principals, municipality administrators, and researchers. Their experiences were explored through semi-structured interviews. The data were examined through content analysis and categorized into themes depicting the goals and goal-setting process in RPPs, the experiences of RPP activities, and the factors facilitating and challenging RPPs. The results show that stakeholders viewed the goals through the perspectives of professional development; supporting the growth and learning of students; and developing school, municipality, and research practices. Regular participation solidified the commitment to the RPP process. Horizontal interaction worked well between stakeholders, but challenges arose with vertical interaction. We found multiple roles for researchers and municipality administrators. Researchers found that they take on a new role in RPPs as change agents and facilitators. Regarding the facilitating or challenging aspects of RPPs, an open and flexible attitude and atmosphere and readiness for change are demanded on all actor levels. Mutual appreciation and sensitivity facilitate RPP activities. We propose taking all stakeholder perspectives into account when designing RPPs aimed at systemic change and that RPP processes should facilitate both horizontal and vertical interaction.

Keywords: research–practice partnership; educational transformation; professional development; school improvement

1. Introduction

1.1. The Need for Transformative Research–Practice Partnership in Education

Transformative educational research is a creative endeavor, in which the phenomena under study appear and manifest in a variety of ways depending on the situation and context. The formation of such knowledge requires interaction and collaboration with various communities of actors, such as learners, teachers, principals, parents, education providers, and researchers. However, the educational system is too isolated from the surrounding society, and the educational research community is too isolated from educational practice. This challenge has often been described as a "research–practice gap" between the two communities [1] or "siloed" organizations that come together to collaborate [2]. The research has had clear shortcomings in accommodating the needs of practitioners. For example, it is said that researchers can often have a too shallow and one-directional relationship with educational practices, and traditional educational research has been criticized because the outcomes do not transfer to praxis, preventing the design of intelligible praxis [3–5]. Often, academic research relies on foundations and measures that do not correspond to

current educational realities and societal needs. This can lead to increasing frustration on the part of schools and teachers regarding having to invest a great deal of effort in research collaboration without reciprocal benefits [6,7]. Although investigations are published in international scientific journals, the findings are not systematically and comprehensively introduced to the educational field to support transformations.

To fill this gap and overcome educational practice and research challenges, various actors, such as policymakers, funders, and researchers, are promoting and developing research–practice partnerships (RPPs) to ensure a closer interaction between research and practice [8,9]. The purpose of this research is to study the RPP as a strategy for educational transformation in the context of digitalization. Digitalization is challenging all spheres of society, from everyday life to professional practice. Rapid changes in the emerging digital and innovation-driven knowledge society necessitate radical updates to prevailing educational practices. Working life requires educating young people to have sufficient epistemic fluency [10] in solving nonroutine problems and deliberately pursuing innovations mediated by complex digital technologies. We first discuss the theoretical principles of RPPs and then contextualize the discussion to Finnish education through a partnership framework our research group has developed over several years in collaboration with the national Innokas Network and schools in the context of digital transformation in education. A special interest of ours is including the multifaceted perspectives of RPP stakeholders (teachers, principals, municipality administrators, and researchers), which is viewed as important but scarce in RPP studies [11,12]. We depict the different experiences of these central actors in our RPP. Finally, we reflect on our framework in light of previous studies and our results.

1.2. RPP as a Strategy for Educational Transformation

Educational design processes have been criticized for failing to incorporate teachers' agency and role when designing interventions or novel ways of teaching. Even though educational design is, by definition, iterative, in practice it is too often linear, which complicates the relationship between researchers and teachers. Moreover, if researchers are too active in setting design aims, the teacher is reduced to a mere adopter of the outcome [13]. In RPPs, authority is more evenly distributed among stakeholders than in other forms of educational intervention. This is seen as central to the democratization of evidence and a "step toward closer collaboration between researchers and practitioners, and a more equal evidence system" [1].

By definition, RPPs are intentionally organized, long-term collaborations that shift power relations and work toward educational improvement, with research as their leading activity, bringing together a diversity of expertise. They can form among partners aiming to achieve different outcomes, from system-wide change to improved classroom practice. The aims are negotiated collaboratively, and authority is shared. RPPs are developed strategically and include structured rules, practices, and roles. Refs. [11,14] state that RPPs' main aims are (1) generating research findings to inform practice or policy, (2) increasing schools' capacities to implement sustained improvement, and (3) designing resources for school practices.

In an RPP, teachers are positioned as members of the research group and educational innovators who can design and develop practical solutions. Teachers and researchers appreciate one another's expertise; teachers are experts in subjects and praxis, and researchers are experts in educational and learning sciences [15]. Both parties invest their time and resources in achieving a common goal and can learn from participation. This results in novel ways of teaching and researching. Teachers are considered not adopters of educational products but, rather, designers of typically intangible and open-ended social innovations [16], and teachers' relationships to them are also developed through designing.

A systematic literature review by Sjölund et al. [1] on RPPs mapped the roles of researchers and practitioners. The categorization of roles is anchored in the main processes of RPPs: inquiry, design, and dissemination. In the inquiry process, the stakeholders work

together to extend knowledge on a problem of practice. In the design process, collaboration is based on designing a solution for school development. The dissemination process is focused on knowledge sharing regarding RPP processes. Researchers and practitioners can have several roles in all three based on the main process of school development. Researchers' roles in the main process include expert, coinquirer, facilitator, leader, adviser, and disseminator; practitioners' roles include coinquirer, inquirer, designer, translator, and disseminator. The roles of researchers and practitioners are positioned differently in relation to one another.

The benefits of RPPs include implementing relevant policy-level changes and improving student achievement and teaching quality [17]. RPPs aid in building a new epistemic professional community of teachers and researchers [18], intertwining professional and scientific knowledge. They support researchers and teachers in designing practical solutions in collaboration [19,20]. A US study on RPPs during the COVID-19 pandemic found that in 2020, there was an increase in design-oriented RPPs aimed at collaboratively generating new materials, tools, or activities as compared to those that focused on data, information gathering, or evaluation [2].

However, despite the promising opportunities in terms of school improvement, research on RPPs' mechanisms and dynamics is scarce [8]. Challenges include miscommunication due to the lack of a shared language or culture [2,17], and despite RPPs' best efforts, they can become more responsive to the needs of practice and policy partners [2]. More information is needed about how RPPs can help navigate these challenges. Most studies on RPP dynamics have focused on the researchers' perspectives and studying the impact of the interventions [19]. There is a need to examine how actual RPPs are designed and function when attempting to foster educational improvement. These studies should be performed in collaboration with and include multiple perspectives, from researchers to school- and municipality-level actors [12,13].

1.3. Creating Transformative RPPs in the Finnish Educational Context

To support educational transformation in the context of digitalization, our research group collaborates with the national Innokas Network to create RPP practices with school- and city-level actors in Finland. These practices include teachers and principals (the school level), administrative leaders and experts (the municipality level), and researchers (the university level). The main platforms for developing RPP practices have been the Transformative Expertise (TE) and the Growing Mind (GM) consortium projects.

The Transformative Expertise project was implemented during the 2017–2020 period [21] and focused on the holistic development of schools through RPPs with two schools (the school level). Researchers worked with teachers and headmasters from both schools on a jointly chosen development topic. During the project, we noticed that more structured organization- and city-level actors would have been an important part of developing a participatory and effective RPP. Based on the TE project and other projects' results, as well as reviewing research on RPPs and combining knowledge and expertise from our networks, we built the new project initiative, Growing Mind.

The GM project was implemented during the 2018–2023 period. The main practice side partner was the educational department and schools from the City of Helsinki. The project focused on renewing Finnish primary education via the connected efforts of an interdisciplinary research network (computer science, craft science, education, information science, psychology, neuroscience, and science education) and school- and city-level educational practitioners. The project was aimed at supporting individual, social, and institutional renewal in responding to the societal challenges arising from a digitalization- and innovation-driven society and featured six work packages focusing on these themes (Figure 1).
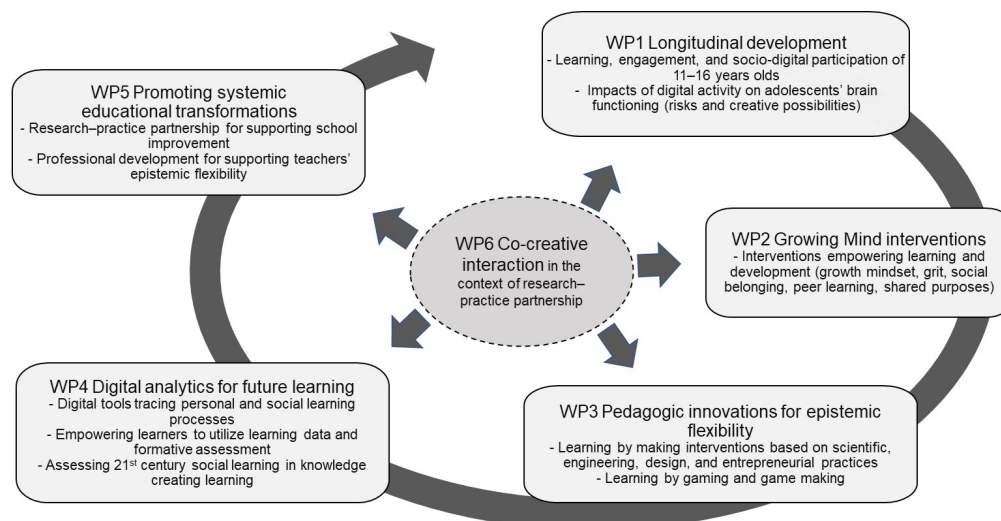
Figure 1. Structure of Growing Mind project.

At the beginning of the GM project an RPP framework was created to depict the various actors, levels, and ways of working (Figure 2). It draws on research knowledge and empirical experiences from past projects. In the GM project, the RPP activities were coordinated and organized by a management team (A) composed of researchers who work in collaboration with municipality-level leaders. On the school level, the researchers organized and coordinated the activities with the school principals and management teams (B) and co-developed school practices in direct contact with teachers (C).
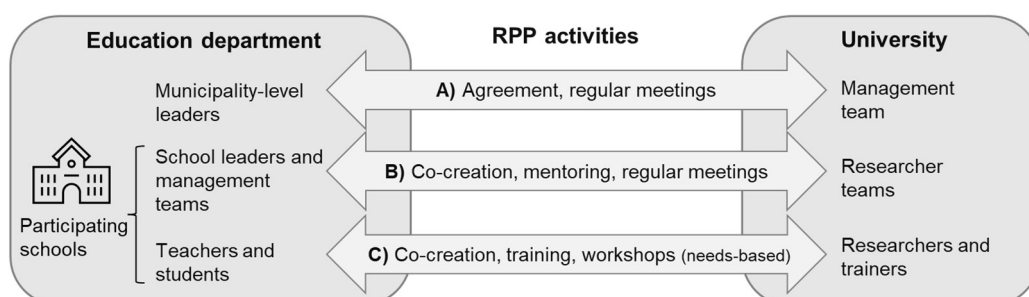

Figure 2. RPP framework for educational transformation in the GM project.

At the university, the project was organized by a management team consisting of researchers, a project manager, and a coordinator. Each work package was led by a professor and had a researcher as a coordinator in charge of practical organization. The project manager and coordinator led recurring meetings for the work package coordinators and leaders, respectively. The meetings occurred, on average, every two months; the issues discussed were taken to be addressed in the RPP management-level meetings with the municipality administrators.

At the municipality level, the RPP activities consisted of management team meetings, in which the principles were discussed and research activities were planned. For example, the administrators reviewed the questionnaire forms and scheduled them based on a suitable time for the school year. At the beginning of the RPP activities, the focus was on practical organizational issues, such as allocating schools into theme-based work packages, assigning contact persons for each theme in the municipality administration, and agreeing on communication channels at the city and school levels. The focus shifted gradually to status updates, needs reviews, and pending organizational issues. Activities were reviewed and re-evaluated in each phase. In the next phase, the activities moved toward applying the initial research results and changing practices accordingly. In the third year, a results presentation meeting was organized for the education division leaders, including school

district/area leaders, that discussed the results of all the themes and their use at the city level. Thereafter, the results were presented annually.

The RPP activities were launched in 2018 at schools with a state-of-the art analysis and self-report questionnaire. Discussions were held among schools and city-level actors; a questionnaire was administered to schools, and interviews were performed. Based on these initial analyses and research knowledge, the central needs were identified, and a status overview was performed. Researchers presented the results to teachers and principals at schools and city education division administrators. Based on these initial results and after presenting the needs analyses, schools and researchers collaboratively decided on their individual development themes. During the development work (2018–2022), the role of the researchers was that of co-developer and mentor for both teachers and school leaders. Supportive measures, such as workshops or training, were provided for schools based on their theme-based needs, with researchers promoting the activities.

1.4. Research Goals

The purpose of this article is to study teachers', principals', education division administrators', and researchers' experiences of RPPs in the context of the created framework. We examine these experiences to answer the following research questions:

1. How did the actors describe the RPP goals and goal setting?
2. How did the actors experience the RPP activities?
3. What kind of facilitating and challenging factors regarding the RPP did actors experience?

2. Materials and Methods

2.1. Context and Participants

This interview study was conducted in the contexts of the TE and GM projects. From the smaller-scale school-level TE project, one participant took part in the study, and from the larger-scale school- and municipality-level GM project, seven participants were involved. Two actors representing each role (administrator, principal, teacher, and researcher) were selected from the projects (Table 1). The teachers and principals came from different schools, the municipality administrators came from different positions within the city's education department, and the researchers had different levels of experience (one junior and one senior researcher).

Table 1. Study participants, role in RPP, previous RPP experience, and length of interview.

Pseudonym	Professional Expertise (Years)	Project	Role in RPP	Previous RPP Experience	Length of Interview/Transcript
David	5–10	B	Class teacher	no	42:03 min/5462 words
Harriet	11–20	B	Class teacher	some	36:01 min/3930 words
Anne	20+	B	Principal	no	42:12 min/5600 words
Lisa	20+	A	Principal	no	42:25 min/5738 words
Beth	20+	B	Administrator	some	51:22 min/7029 words
Matt	5–10	B	Administrator	some	60:41 min/6478 words
Rose	5–10	B	Researcher	no	58:20 min/6302 words
Ray	20+	B	Researcher	some	58:43 min/6930 words

2.2. Data Collection and Analysis

Data collection was performed through semi-structured interviews in the fall 2020; the RPP activities had been underway in both projects for 2.5–3 years. Initially, the participants were informed that the interview dealt with the project that they were participating in, the aim was to study the participants' experiences of RPPs, and we would be interviewing people with different roles. The interview was structured in three parts to answer the following three questions: (1) How do the participants perceive the RPP that they were a part of, and what do they consider its aims to be; (2) how has it been a part of the

participants' work and own actions; and (3) what kind of experiences have the participants had regarding the RPP.

These three themes were followed so as to allow the interviewees to speak freely and express their thoughts, and new themes were introduced only after they had clearly completed their self-reports. The interviewer was responsible for ensuring that the planned themes were covered. The interviews took 36–60 min each and were digitally recorded and then transcribed.

The data were analyzed using qualitative content analysis and an abductive approach. A theoretically grounded abductive approach was considered suitable because the RPP is a relatively novel phenomenon in Finland and this approach helped us connect the results of this study to the international RPP discussion. The interview analysis was performed using descriptive coding [22]: expressive coding specified the meaning of the text segment appropriately. A single coherent idea was defined as the unit of analysis [22]. In the analysis, a single mention can belong to multiple categories, depending on the perspectives it contains. The first and fourth authors improved the reliability of the analysis by refining and retesting the categorization in relation to the data excerpts.

3. Results

We will present the results in accordance with the research questions. We will begin by presenting the analysis for the first research question (RQ1), regarding the RPP goals and the goal-setting process. We will then proceed to answer RQ2, which is about the stakeholders' experiences of the RPP activities. Lastly, we will discuss the facilitating and challenging factors of the RPP as experienced by the stakeholders (RQ3).

3.1. RPP Goals and Goal Setting

To answer the first research question (RQ1), the stakeholders were asked about the goals and goal setting of the RPP. They depicted the goals as professional development, supporting the growth and learning of students, developing school and municipality practices, and developing research practices. They also described the goal-setting process and discussed the level of commitment to the RPP's goals (see Table 2).

Table 2. Categories of RPP goals and goal setting.

Theme	Category	Exemplifying Data Excerpts
Goals	Professional development	We chose co-teaching as a development goal at our school. We have had pretty good structures for it, but [there was a need] for strengthening our co-teaching practices. (David, Class Teacher)
	Supporting the growth and learning of students	I could actually do some experiment within this type of research-practice partnership and see whether it has an impact and does it advance students' learning. (Anne, Principal)
	Developing school and municipality practices	The goal would be that the partner would be on the receiving end, that through this collaboration, we could genuinely find those new practices or, for instance, insights or experiences in the field. And through a summary of these, we could answer to the needs at the level of the education organizer. That our combined experiences would then help their guidelines, decisions, acquisitions, or resourcing. (Rose, Researcher)
	Developing research practices	The goal is that practice is emphasized on the research-side of the partnership. Striving for concreteness and understanding the phenomenon so that you can then as a researcher get a grasp of it in practice and consult and guide. As a researcher, practice and partnership are emphasized and you can take a different role at times. After this you will see the research in a different light. (Rose, Researcher)

Theme	Category	Exemplifying Data Excerpts
Goal setting	Process	First, a questionnaire was administered to all teachers, or questionnaires. There were, in fact, several. So, we tried, in that sense, to find those issues that we would want to develop as a school and what are the things that in the teachers' opinion are the issues that we want to develop. Then, we in the leadership team, together with the researchers, have looked at the data and considered, with the aid of the researchers, the main themes. And, then, we have taken those to the teaching staff and explained that these were the topics that were evident in their answers. (David, Class teacher)
	Commitment	I have a feeling that regarding the goal that we have, developing collaboration, the excitement has weakened. It should be long lasting, so that it doesn't turn out so that, first, the excitement rises and, then, it is strong and, then, it drops. (Lisa, Principal)

Goals. According to the teachers, their goal was to use the results and research to further their professional development and continuous learning, such as through employing team teaching, and to develop school structures that impact teaching and teachers' work. The teachers considered bringing up the role of research-based knowledge in school development. From their perspective, the research results could illuminate the importance of development work. The teachers also viewed the goals from the students' perspective: the underlying goal of RPPs is to *support students' growth and learning* by changing the actions of teachers and principals.

> We had chosen coteaching as our main development goal in this partnership. Of course, I, myself, wanted to develop and think of sensible ways that help teachers but that students would also benefit from, that there would be a genuine benefit for students and for myself, of course.
>
> David, Class teacher

The principals and municipality administrators viewed RPP goals from the perspective of *developing school and municipality practices*. For the principals, the RPPs' goals were anchored in holistic school development, which is a long-standing, continuous process. They hoped that the RPP would aid in tackling challenging school development issues, such as students' well-being or developing innovation and technology skills. They were interested in research-based evidence regarding what has been performed and how and the impact developmental efforts have on school activities.

The municipality administrators viewed the RPPs' goals from the perspective of the education division; the goal was to use research-based knowledge in developing the division's and schools' practices. The researchers depicted the RPPs' goals from the perspectives of *developing research practices* and city- and school-level development. The goals included supporting data collection related to development activities and understanding the complexities and causalities of school practices. The researchers suggested developing new school-level practices as a goal and set, as a city-level goal, the use of co-development and collaboration to support the municipality's aims.

RPP goal setting. The actors viewed RPP goal setting at the classroom, school, municipality, and university levels through both the goal-setting *process* and *commitment* to the goals. The teachers considered the goal-setting process at the school level based on the results of the need analysis administered at the beginning of the project. In accordance with RPP principles, the schools were provided with summary reports of the needs questionnaire results. The questionnaires were administered to all the teachers in the project schools, and some were selected for more detailed interviews. A joint co-development meeting was held at the start of the projects to present the summary of the results of the questionnaire and identify common development themes. This meeting was viewed as increasing the commitment of both the school principal and teachers to the joint work. One teacher felt that the joint goal set based on the questionnaire, developing team teaching, was deepened through the RPP and genuinely taken into consideration when developing school

structures. The other teacher raised the question of the declining commitment of both teachers and researchers after the initial phase of the project. They discussed not following through with the development tasks and the lack of project visibility at the whole-school level. They felt that RPP meetings for all staff would have been beneficial throughout the project and strengthened the commitment to reaching joint goals.

The principals also paid attention to the commitment to RPP goals. They thought that without active and participatory co-development that took the entire school community into consideration, the initial enthusiasm about reaching joint goals might dwindle. They also considered other factors that may affect commitment, such as teacher turnover. They reflected on the RPP goals of their schools and compared them to the city-level goals. According to them, this goal-setting process helped both them and teachers to concretize earlier goals that the city had given to schools.

> Being systematic, utilizing digitality and transversal thinking: those are our goals. They go into what, at the moment, the city education division's goals are. Now that we are starting to make an implementation plan, I think that everyone will notice that what we have done in this RPP has been useful.
>
> Anne, Principal

The municipality administrators considered committing to RPP goals from the perspective of organizing and leading a large educational service sector at the city level. They found that all the actors in the education division administration and leadership recognized the importance of shared RPP goals but wondered how much the administrators are committed to the goals and achieving them. One interviewee wondered about whether more frequent communication and participation with the administration leaders would have increased the commitment of city-level actors to the RPP activities and the use of the research results during the project.

Researchers view the joint goal setting of RPPs as a continuous, iterative, and cyclical process. One researcher felt that the goals set based on the initial needs surveys should be re-evaluated and redirected at the end of each development cycle. The researchers found that they had to explain the RPP's process-like nature early on. They suspected that school- and city-level actors might misunderstand the RPP process and its end result as being more linear or one-off than it actually was. For this reason, it is important to depict the process nature to the actors at the beginning of the partnership. The researchers clarified the RPP process to the school actors by representing it visually and providing timelines of the process in the co-development meetings.

> We have drawn and scheduled and presented the RPP activities so that during the first school year, we test and experiment and write down different experiments and innovations and share them actively. Then, after Christmas in the spring semester, we outline them, make a decision, and choose the practices that suit the school and that we will start to support and carry forward or take up more widely as the school's practice. So, we do discuss the RPP process a lot, but somehow, it feels that it is clearer to me, this iterative model, than to the teachers in the field.
>
> Rose, Researcher

The researchers highlighted the fact that making the processual nature of the RPP known to the actors throughout is aimed at continuous and self-directed school development. The idea is that the development work with these practices will continue in schools after the RPP has ended.

3.2. RPP Activities

To answer RQ2, we analyzed the stakeholders' answers regarding their experiences of the implemented RPP activities. We depict their experiences with RPP practices, interactions, roles, and perceived benefits (see Table 3).

Table 3. Categories of experiences of RPP activities.

Category	Exemplifying Data Excerpts
Collaboration	Well, I suppose this kind of practicality and that kind of feeling of understanding of everyday issues (is important) because then, these actors were present in our everyday (school life) and, like, connected with people as individuals in the interviews and whatever the activity was, so maybe, in that sense, this type of feeling is what stayed with me. (Lisa, Principal)
Interaction	The thing that in my opinion is great about this is that this dialogue is reciprocal, like when we think about what kind of practical questions or problems we should solve. (Beth, School district administrator)
Roles	I was initially in the role of a school leader more than in the role of a special education teacher (double role). As a school leader, I was developing the school, and my role was to perhaps promote things progressing in the direction of what was seen as necessary. (Anne, Principal)
Benefits	I strive, in this current position, to always also bring forward the perspective that we could make use of the university researchers and experts and somehow involve them. This isn't necessarily strongly in everyone's mind here in the municipal administration. So, I really appreciate/value the work of the scientific community and see it as really important in this development work. (Matt, Education division administrator)

Collaboration. The research–practice partnership activities were, according to all the actors, practical and humane and included characteristics of co-development. According to the principals, the presence of the researchers in school and in everyday school life supported trust building and a feeling that they wanted to understand the school's day-to-day practices. One principal viewed the RPP as a new way of working and emphasized the meaning of the partnership-related aspect of RPPs. The principal referred to the somewhat negative views of research and the fact that the concept of research in schools is often viewed as requiring additional tasks that do not necessarily have an impact on one's own work.

> Since RPP starts with the word "research", I immediately get the feeling that now, we will do research, and I have to fill out questionnaires. I would like to emphasize this partnership even more because that is the important part. Because we get so many questionnaires in schools and such, so I feel that people are kind of allergic to it, so it brings this feeling of extra work. Somehow, the partnership should have the most emphasis in the concept (RPP); maybe, it does have some emphasis, but yeah, these are just, maybe, thoughts.
>
> Lisa, Principal

The teachers emphasized the meaning of working together and co-developing. It was seen as important that researchers and teachers collaborated to find ways to achieve jointly set goals. The municipality administrators brought up the meaningfulness of collaboration in organizing the research and development work. From the perspective of a large city, the management team is crucial in selecting the schools and communicating with them about the RPP and research activities, which prevents overlapping surveys and research activities. They also mentioned co-planning research instruments and data collection processes. The city-level actors contributed their own expertise, such as by bringing up relevant questions to be added to the surveys and guiding schools and principals in implementing surveys or other research activities.

The researchers also emphasized collaboration and the fact that, through the RPP, the actors strive to understand the studied phenomenon in the context of the school and city activities. One researcher viewed RPPs as a new way of working as the principal did. RPPs differ from the traditional understanding of research and how it has been implemented; as a solution and practice-oriented way of working, they inspired the researchers and even motivated a person who had worked elsewhere to return to research. The researchers felt that RPPs enabled them to both support everyday practical school activities and engage in substantial transformative school development research.

Interaction. All the actors stated that the horizontal interaction with the researchers had worked well. The teachers felt that the collaboration was genuine and interactive and that the researchers learned about the school's needs and guided and supported them and

the effort constructively and in a way that supports their work. This type of interaction, adhering to the principles of partnership, was new, in a positive way, for the teachers. Previous experiences reflected the activities being carried out mainly on the terms of the research and a more hierarchical relationship between research and practice.

> I have been flattered by the fact that our researchers have really genuinely been interested in our school's practices and that they have, with a really sensitive ear, listened to us and what we want. The thought was "Let's start from what are our school's needs". Then, they have managed to, really well and professionally, break it up into smaller pieces or find, from there, the things that we should focus on. It has been kind of a substantial privilege in this work.
>
> David, Class teacher

The principals depicted the interaction with researchers in terms of participation and its duration. They found that individual visits from researchers or discussions with experts can often remain superficial, whereas in RPP activities, the interaction is more in depth. The researchers familiarized themselves with the schools' practices and the actors and were present for everyday life. At best, they were sounding boards for the principals' thoughts and ideas. The school staff may also begin to feel that the researchers are part of the school community and staff.

The municipality administrators felt that the discussions and interaction that they had with the researchers initially involved getting to know one another and familiarizing themselves with the practices of a large city's education division and the structure of the project. In the joint management team meetings, a shared understanding was initially built around the goals of the activities and slowly moved to planning and organizing the collaboration. The researchers also brought up the initial building of a shared understanding. According to them, the interactions with both the school- and city-level actors were positive and inspirational.

The teachers, one municipality administrator, and one researcher brought up the lack of vertical interaction. The teachers felt that the interaction with the researchers worked well but that, within the school, the communication about the RPP activities did not necessarily work. The researchers met the principals and leadership teams, but in all the schools, the issues discussed were not communicated to the entire staff. This lack of vertical interaction was also somewhat evident at the city level. The administrators, who were not a part of school leadership teams, felt that they received little information about project activities. Such information was disseminated in yearly results meetings for administrators, but that was not sufficient in terms of supporting the administrative experts' work in the education division. One researcher described attempting to make up for this lack of interaction by acting as a messenger between actors.

> Each organization is already such a complex entity in itself. It is important that you connect with different stakeholders, even if you think that they are colleagues. Many times, I have noticed that there is a benefit to contacting one unit and the other and a third one. This offers slightly different things or slightly different perspectives, and then, the information starts to disseminate between them and from mouth to mouth. And through that, you get to collaborate with people who have different perspectives with different units. So, you can't soothe yourself into thinking that if you have interacted with one member of the main organization, then you will, kind of, have the whole organization be aware, as a partner, of the things that are being done.
>
> Rose, Researcher

Roles. The municipality administrators and researchers brought up different and changing roles. The administrators described their own role from the perspective of both the city's expert and communicator roles. The administrators' task was to serve as experts in the city's and schools' practices and act as reflection partners when planning

research and supportive activities, as a mirror but also as co-planners of data collection and communicators to the schools.

> It is a lot about bringing together people and things and, then, also, a lot of communication and informing (people) about opportunities, encouraging people to join, but maybe it can be summarized as communicating.
>
> Matt, Education division administrator

The researchers stated that they had clear roles, such as work package leader, coordinator, or being responsible for a specific dataset. However, as time passed, the roles diversified. The multidimensionality and versatility of the RPP activities require roles and competences that differ from traditional conceptions. In addition to traditional research planning, data collection, analysis, and reporting, the researcher serves as a facilitator of change in school practice and competence development and a discussion and reflection partner.

> You have to always have an open mind and jump into whichever situation is ongoing. All things can't always be planned, but you also have to acquire this role of a full-standing member of each partner community and staff and kind of blend into it while you are working. You have to have the ability to quite quickly absorb the dynamics, roles, and ways of working of the partner community so that you can function there and, then, contribute something going forward. It is a very versatile job description.
>
> Rose, Researcher

Benefits. The teachers felt that the collaboration supported their professional growth. They obtained new ideas and inspiration to develop their own practice from the discussions with the researchers. They felt that the collaboration and research also received support and strengthened their own development work and that the RPP directly impacted the school's structure and practices. One teacher brought up the impact of noticing the meaningfulness of the work and the idea of self-efficacy.

> The partnership and research results may stay somewhere in the back of my head for years, (the idea) that, oh, my, they are doing something right or in the right direction. So, when we get these types of results, it is for the development work, and kind of, from a holistic point of view, it is a really good thing.
>
> Harriet, Class teacher

The principals also raised the issue of obtaining support from the RPP for their own work and school development. They described researchers as discussion partners and inspirers, people who could offer peer support. The collaboration strengthened the principals' own agency. They received constructive support during discussions and about the selected development path. The scaffolding and timeline structured and streamlined the work. The principals mentioned that the tailored workshops and training based on the initial needs analysis, consultations, and developing the schools' communal spirit have been concrete benefits. One principal mentioned the research-based nature of the RPP. They felt that they benefited from an outsider with a research perspective viewing the schools' practices analytically. This concretizes and brings up issues that may have already be somewhat known but not yet fully recognized in the school community.

The municipality administrators described the benefits and meaningfulness of the RPP from the perspectives of the education division and developing their own work. The forward-looking focus of scientific communities and research-based co-development support both experts and leaders on the city level.

> I have found it interesting that now that we have had the opportunity to be in international arenas, it is quite frankly marvelous that are we not on opposing sides with the university, that we do work together. I say that I couldn't imagine that my own work would be successful without this type of research partnership, especially

in this current position, where the core of my work is to develop our education's pedagogics and think about how to take these pedagogical issues forward.

Beth, School district administrator

However, the other administrator raised a concern that their colleagues did not share this positive attitude toward RPP and research knowledge. The researchers viewed the RPP benefits as a win–win situation. They thought about the support opportunities for the school and city that the RPP enabled. They also noted that the research results could help develop both school- and city-level activity. The RPP enables the meaningful implementation of research. The data are collected as part of the schools' and city's everyday schedule so that the researcher can be present in the school actors' daily work. The researchers also mentioned professional development. They felt that the RPP, as a way of working, gave them a newfound opportunity to conduct research, develop their own expertise, and deepen their understanding of educational practices.

For the research community, there is surely the benefit of being up to date. You are aware of what happens in the field, what are that day's topical issues, and what are the issues that teachers struggle with. You are then concretely inside the school, and you see what tools, materials, and spaces they have at their disposal and how they work in schools.

Rose, Researcher

3.3. Factors Facilitating and Challenging the Partnership

Lastly, we discuss the facilitating and challenging factors for the RPP as experienced by the stakeholders (RQ3). The actors describe these using attitudes, operational environments, resources, participation, and shared understanding (Table 4).

Table 4. Categories of facilitating and challenging factors for the RPP.

Category	Exemplifying Data Excerpts
Attitude	I would summarize it to that partnership and collaborating, so the other is not more valuable than the other, but that one plus one is more than two, so both sides, like, bring their own views to it so we reach something new in moving forward to, maybe, something unpredictable or unplanned. (Rose, Researcher)
Operational environment	How well aware are you that schools are so different? Can we take into consideration enough that what are the needs for a small school and school leader compared to the big school? They are very different worlds. (Anne, Principal)
Resources	The challenge comes, of course, from this kind of hectic school daily life and from the fact that there are so many other things also, important things that should be worked on. For instance, in the leadership team, there are many things that have to be dealt with outside this RPP so that, of course, finding the time to, like, think about these things is, in our work, the challenge. (David, Class teacher)
Participation	How you would develop it so as to make it more smooth, in a sense? That what we actually have as a goal and the problem and research need would come from the school's side? It would be important to increase how much the teachers' voices are heard. (Anne, Principal)
Shared understanding	(It is important) that have we understood the issue in the same way. Then, do we want to understand, like, in a sense, the different actors' thoughts about whether we are even taking the school in the same direction? (Harriet, Class teacher)

Attitude. According to the actors, the RPP activities require an open and flexible attitude. This way of working is new to everyone and beginning and maintaining it require that they all be ready for change. One researcher said that a lack of openness and flexibility challenged implementation.

I was kind of sensing, in the discussion, that there is only one right way and that we will commit to this. This kind of criticalness, creativity, adapting, re-innovating, are not always there.

Ray, Researcher

The principals and researchers considered how to inspire teachers to join in the development work and continuous competence development. An atmosphere that has a positive and inspired stance toward development supports RPP activities and participation. The principals and researchers referred to changing the teachers' general attitudes toward research, which can be negative because they feel that a traditional study adds to their workload and has no practical benefits.

The municipality administrators considered the principals' and, therefore, the schools' attitudes toward RPP activities. They wondered about how to ensure that schools that have not shown interest in participating do so. One administrator mentioned mutual respect for each stakeholder's practices. The other actors felt that respect and valuation were the foundation of RPP activities and enabled trust. The researchers viewed respect and valuation through sensitivity and humbleness; they could build a confidential and well-functioning RPP by acting sensitively and humbly with both school and city actors.

One researcher felt that the RPP practices could be new and challenging for some researchers and require them to change their traditional views of research and the subjects of the study as active participants. The RPP principles and building a confidential relationship with the practitioners were not familiar to all the researchers, which can also challenge implementation.

> It has been noticed in this activity that, to some colleagues, it is tremendously difficult that they would report something to the schools and use time to talk to teachers. Not everybody shares and has discussions. Mainly, it is only some that have been interacting. So, we have seen that they are moving closer to this way of working, and they have understood that this kind of sustainable thinking is important. So, we don't quickly collect data and forget the whole thing after that with the schools. They have noticed that it doesn't work.
>
> Ray, Researcher

Operational environment. The teachers brought up the physical location of school buildings as an enabling or challenging factor in RPP activities. According to one teacher, a school having been divided into several locations inhibits the interaction and partnership between the scattered actors. They also mentioned the school's organizational and communicative structures. If these are not in place, it is difficult to ensure that the RPP activities encompass all teachers. According to the teachers and principals, both the organizational structures and schools' everyday life, staff turnover, and changes in student groups affect the sustainability of RPP activities. All the actors mentioned the pandemic and its impact on RPP activities. It especially affected the operational environment. The city- and school-level actors had to focus on reorganizing daily functions. The pandemic was also a challenge because researchers could no longer visit schools, and it required additional effort to find new ways to organize practices.

The city-level actors reflected on the impact of staff turnover on RPP activities. The stability of staff and structures would aid in continuing and long-standing development at this level. An organizational reform in the municipality administration challenged the RPP's commitment and realization. One administrator emphasized understanding the various operational environments and practices of the actors for the sake of a well-functioning RPP. They considered various ways of networking the actors and the fact that it would be good to get to know the other actors. A self-organized joint effort and communication would be easier if the actors were familiar with one another. The researchers saw the genuine operational environments, such as meetings and co-development with the school and city actors and classroom situations, as an important opportunity for research. Being a part of school- and city-level activities offers researchers a new way to contextualize research, understand the studied phenomena, and impact school- and city-level development.

Resources. According to the teachers and principals, scarce school resources can challenge RPPs. On one hand, the schools' hectic daily life and strained teachers and principals can challenge adopting a new way of working and development work. On the other hand, an RPP is also viewed as a possibility. A well-functioning RPP can support

teachers and principals' well-being at work and inspire the development of practices for both the entire school and the classroom.

The teachers, principals, and researchers brought up the time available for RPP. The teachers and principals considered how to strike a balance between everyday practices and RPP work. According to one principal, the school's time structures did not necessarily, in the best possible way, support the school development needs of today, such as co-development and partnerships.

> Well, it is a challenge for timelines that you have to, somehow, think (about) how you get it to fit in the joint time slots. If there is something joint, then you have to think that if we have only that one afternoon that the principals can allocate for co-planning, like, what is a really dumb and dated thing (that is). So, it is probably a kind of challenge. And there were always some things that you only had to go through together; then, you have to, kind of, make some adjustments.
>
> Lisa, Principal

Time was also brought up as a possibility. When time is allocated as part of the school's everyday activities, it enables continuous competence development for both teachers and principals. The researchers also struggled with the available time, which was not always sufficient for collaboration. RPP, as a way of working, is new for all the actors and requires a shared vision to change practices and find time. All three types of actors also viewed time as an opportunity. Allocating time as part of the daily plans through the work of the leadership team and teacher meetings enabled the researchers to participate in authentic work as part of the school community.

Participation. The teachers and principals described teacher participation as both an opportunity and a challenge. According to one teacher, it would be important to have all the teachers participate in long-standing activities. If the activities are not maintained, participation may cease. The teachers on the school leadership teams and those who were active participants in the partnership had the opportunity for continuous co-development through the RPP. For the remainder of the teachers, these activities may remain distant and superficial if these are not presented or communicated about regularly and the teachers are not encouraged to participate.

The city-level actors thought about participation through adaptation and the needs basis of the activities. They view the RPP as an opportunity and a win–win scenario. The goal is to implement research and development activities that involve and serve the different needs and goals of the partners. One administrator compared the activities to traditional research and described their relative adaptivity. They saw that the RPP could consider the various actors' needs and that the research evolved and adapted based on the RPP activities.

The researchers viewed participation from the perspective of teachers and principals and felt that it was key to consider the type of collaboration with school actors and present the research results and knowledge to them so that it would involve them and inspire them to engage in continued partnership. Communication channels that support participation were also brought up. According to one researcher, it is important to consider what operational and virtual channels will best enable open and transparent accessibility for all partners.

Shared understanding. Shared understanding was viewed as both a possibility and challenge. Building it was seen as an issue within a group of actors and between different groups of actors. The teachers' and principals' different experiences of the functionality of schools and visions for school development may be a challenge, but according to one teacher, genuinely listening to the other party supports building a shared understanding.

The researchers investigated building shared understanding both among the researchers and between different groups. In this comprehensive RPP, which brings together several researchers and disciplines, creating a shared understanding of the activities and scientific goals can be challenging. These situations demand flexibility on the part of researchers and genuine listening on the part of the other party. One researcher also consid-

ered building a shared understanding between actor groups and suggested that it would be good to develop more ways to do so, so that it would serve both practical educational work and research.

4. Discussion

The purpose of this study was to gain insight into the experiences of teachers, principals, municipality administrators, and researchers regarding RPPs, especially their aims, activities, and facilitating and challenging factors, in the context of the digital transformation of education. The platform was the long-standing work in two RPPs (Projects TE and GM). The starting point in building our framework was the assumption that the "socially robust knowledge" [23] needed for school transformation can only be created in close collaboration with educational practitioners, such as teachers, principals, and school administrators. Such a partnership entails a long-term commitment to collaboration to jointly overcome the challenges of digital and innovation-driven societal transformation. The results of this study depict the stakeholders' experiences of RPPs from the school practitioners', administrators', and university researchers' perspectives.

The first research question considered the stakeholders' views regarding the RPP goals and of the goal-setting process. Both the school- and city-level stakeholders (teachers, principals, and administrators) and researchers viewed the goals from the perspectives of professional development and continuous learning [24–26]. The practitioners brought up the need for research-based professional development, whereas the researchers had the complimentary need to understand the complexity of school- and city-level practices and causalities. In addition to professional development, working on the operational environmental structures and strategic educational development was a goal for all the actors. These results related to Kali et al.'s [14] notion of RPPs aiming to further schools' ability to sustainably improve practices. In addition, although the jointly stated goals were clearly discernible, their more precise meaning varied for the actors. In other words, one can speak of the comprehensive or strategic development of the school, but different groups, such as teachers, school- and municipality-level leaders, and researchers, see these from different perspectives and, therefore, emphasize different factors.

The reported experiences regarding the goal-setting process and commitment to goals are in line with previous research results. Joint and collaboratively implemented participatory goal setting with stakeholders [11,27] and needs- and research-based goal setting [14] offer a good starting point and help actors commit to the RPP. However, a concern remains about the participation of all stakeholders for the entire duration of the process [12]. The partners who are a part of the regular meetings are committed to the RPP, but others, such as other school and city stakeholders, may have dropped out of it. Participation in schools depends on how the process is upheld by the school leaders and researchers. Annual meetings with city-level leaders committed them to using research results in strategic educational development but not so much to the RPP process itself.

The second research question enabled us to review the experiences of stakeholders about RPP activities. Experiences of genuine interest in one another's practices, reciprocity, shared understanding, solution centeredness, appreciation, and trust are mirrored in previous studies [1,12] as the characteristics of functioning RPPs. The horizontal interaction and collaboration worked well, according to the stakeholders, but challenges with vertical interaction arose. Vertical interaction between actor levels only worked sporadically, with researchers serving as messengers, and there was a lack of systematic and planned vertical interaction. Moreover, the descriptions mentioned the various and versatile roles of stakeholders [1,26]. Both the researchers and municipality administrators felt that they had multiple roles. The researchers especially emphasized an entirely new approach to their work and the related roles: it required adopting a new role in which they are simultaneously a researcher and an educational change agent or facilitator. The teachers also noticed the role of researchers in building a partnership and implementing new types of activities that support the school's practice. The teachers experienced a new kind of researcher role and

operating methods, which supported their own work and the activities of the work community, as compared to previous research-led and more hierarchical research methodologies. The benefits of RPPs were similar to those outlined in prior research results [17,19] and matched the goals set by the actors. Different actors felt that they received support for their own professional, research, and strategic development.

The third research question focused on the stakeholders' experiences of the facilitators and challenging factors for RPPs. For all actors, RPPs demand an open and flexible attitude and readiness to change on all levels. The atmosphere and existing attitudes either enable or challenge RPP activities. A positive and inspiring atmosphere and new ways of working that counter teachers' and principals' potentially negative conceptions of research support a well-functioning RPP. Moreover, mutual appreciation and sensitivity facilitate RPP activities.

Factors that relate to the operational environment can support or challenge RPPs. The location of that environment, such as that of a school with different buildings; stakeholder changes during the RPP process; organizational changes; rigid schedules; and COVID-19 were challenges. Resources such as available time and energy can impact the partnership. The adaptivity of RPPs was brought up as a facilitator when activities can be restructured and redirected according to the prevailing situation and stakeholders' needs. Participation and activities that consider the various operational ways of working support RPPs. Persistence and building a shared understanding of stakeholders' differing views and experiences are central to developing a sustainable RPP.

Our results strengthen the meaning of the RPP process and participatory practice highlighted by previous studies. The processual nature and participation of all actors are also incremental factors in reviewing our framework (Figure 2). The framework that worked as a basis for organizing our RPP activities took into consideration the horizontal interaction and involvement of all major stakeholder groups. The results highlight, however, that an RPP should include an even broader group of perspectives, in addition to the most central actors, and paths for vertical interaction. It is important to consider the role of researchers [1,26] in facilitating vertical interaction from the very beginning of the partnership planning phase. Additionally, it would be beneficial to more strongly contemplate the distribution of responsibilities and roles in organizing horizontal and vertical RPP activities among researchers and pay special attention to how the vertical methods of activities are planned and implemented in collaboration with practitioners. The results also raise the issue of the static way our model is depicted and a need for guiding iterative processes as a characteristic of the RPP approach. We agree with Kali et al. [14] and argue that a suitable methodological approach is needed to support and investigate RPPs as a process. One solution could be design-centric RPPs [21] or combining RPPs with cyclical educational design research [4,28–30]. Both methods share the same participatory principles as RPPs and support implementing and analyzing the RPP process so as to further all actors' agency and democratize evidence.

When interpreting the results of this research, it is essential to consider the fact that this study was based on a relatively small sample of actors in an RPP and that the interviewed stakeholders all played central roles in implementing the RPP. Additionally, it must be noted that the numbers of participants from the two projects involved in the study were not balanced. One actor participated in the study of a smaller scale, and seven participated in the larger-scale project. It is also worthwhile to note that university-level hierarchies [31] and ethical processes [32], as well as how the processes can facilitate or impede RPPs, do not emerge in the results. This may be because of the practice-related orientation of this study and also the balance between the number of practitioners (six) and researchers (two). Importantly, the students' perspective is missing. Further research is needed with a more balanced practitioner and researcher sample, a larger sample, and contributions from all other relevant stakeholders, such as students and school assistants. This study was implemented in the Finnish context, and it would be relevant to continue investigating the experiences of multilevel RPPs from various countries and contexts. Despite these

limitations, this study provides new knowledge on the RPP process and the importance of understanding the interactional directions and multiple perspectives that stakeholders have in RPPs.

This study viewed an RPP from the multiple perspectives at the school, city, and university levels, aiming to generate new knowledge for practice and policy, support schools' ability to sustain improvement, and design new solutions for school practices [21] in the context of digital transformation in education. To conclude, we argue that in an RPP aimed at systemic change, at the researcher, school, and city levels, it is critical to transform education by empowering educators and researchers to co-design educational innovations and generate actionable improvements rooted in the practices of learning and teaching. Joint collaboration requires reciprocal and continuous learning at the zones of proximal development among teachers, administrators, and researchers so that they can learn new ways of teaching, learning, and performing practical development work and research.

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