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Gaikhorst, L.; van Caem, Saskia; Edzes, Hester; Snoek, Marco; Volman, M.L.L.

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EDITED BY
William Penuel,
University of Colorado Boulder, United States

REVIEWED BY
Daniela DiGiacomo,
University of Kentucky, United States
Maria Jarl,
University of Gothenburg, Sweden

*CORRESPONDENCE
Monique Volman
✉ m.l.l.volman@uva.nl

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How to make equity practical in primary schools? Lessons learned in collaborative action research in an educational research lab

Lisa Gaikhorst[1], Saskia van Caem[2], Hester Edzes[2], Marco Snoek[3] and Monique Volman[1]*

[1]Research Institute of Child Development and Education, University of Amsterdam, Amsterdam, Netherlands, [2]ASKO Scholen, Amsterdam, Netherlands, [3]Faculty of Education, Amsterdam University of Applied Sciences, Amsterdam, Netherlands

Introduction: To bridge the gap between educational research and practice, grants have been made available in the Netherlands for partnerships of schools and universities to engage in practice-based research. This enabled the establishment of an Educational Research Lab Amsterdam (ERLA), for which its founders, also the authors of this paper, chose diversity and equity as a focus. We wanted to strengthen the agency of teachers and researchers to contribute to social justice, through collaboratively designing and evaluating educational approaches that address diversity and equity challenges in classrooms and schools. In this paper, we discuss (1) how our approach evolved; (2) how it promoted agency in relation to diversity and equity; (3) the challenges we encountered and the lessons we learned.

Methods: We present our reflections as a case study of the ERLA, basing our analysis on (1) documents about our approach; (2) minutes of meetings; (3) reports for funding agencies; (4) notes and e-mails; (5) teacher interviews and questionnaires from ERLA-projects; (6) research proposals, reports, publications. Data were thematically analysed, using the three research questions and eight previously developed principles for collaborative research approaches as lenses.

Findings: The ERLA has developed a functioning structure with school-based learning teams and cross-school thematic teams, supported by researchers. The outputs are useful educational approaches to promote equity in schools, concrete tools, professional development for teachers and school leaders, strengthened school board policies, and scientific publications. Along the way, we gained valuable insights about teacher-researcher collaboration: collective agency is achieved when participants contribute from their area of expertise; it involves struggle and requires negotiation; working structures facilitate agency and should be regularly evaluated; a shared vision on approach and object of the collaboration must be actively maintained, e.g., to uphold principles, and with a view to transparency for external partners.

Discussion: This study provides insights into teacher–researcher collaboration within ERLA, contributing a practice-based perspective to the existing Research Practice Partnerships (RPPs) literature and offering lessons for fostering successful partnerships, such as the importance of recognizing differences in expertise and of a shared vision that is actively maintained and revisited.

KEYWORDS

collaborative research, practice-based research, social justice, diversity, equity

Introduction

In the Netherlands, as in many other countries, the educational knowledge infrastructure has been the subject of debate in recent decades. This debate was triggered by an observed gap between educational research and educational practice. Teachers felt that educational research did not address the issues for which they needed answers, and researchers noticed that the results of their studies did not reach teachers and schools (Broekkamp et al., 2009). Collaborative arrangements of schools and research institutes - in the international literature often referred to as Research-Practice Partnerships (RPPs) (e.g., Coburn and Penuel, 2016; Penuel and Gallagher, 2017) - were increasingly seen as possible ways to bridge this gap (Schenke et al., 2016; Van Schaik et al., 2018). As an incentive to establish such collaborations, grants were made available for partnerships of schools and universities to engage in practice-based research, to begin in primary education, so-called 'Educational Research Labs' (Henrichs et al., 2018). This enabled the establishment of an Educational Research Lab in the multicultural city of Amsterdam (the Netherlands) in 2016. The Educational Research Lab Amsterdam (ERLA) for primary education is a cross-professional collaboration network. Within ERLA, researchers from the University of Amsterdam, the Amsterdam University of Applied Sciences, and the Kohnstamm Research Institute (which we will refer to as knowledge institutes) work together with teachers and school leaders from several primary school boards to collaboratively design and evaluate educational approaches for dealing with challenges that teachers identify in their classrooms and schools. The founding researchers and teachers, among whom ourselves, formulated 'ownership, meaningfulness and dialogue' for and between all partners as guiding principles for our collaboration (Snoek et al., 2017).

Based on input from both educational practice, represented by research coordinators from the school boards, and researchers from the knowledge institutes, 'diversity' and 'equity' were chosen as the main focus for the ERLA. Schools in the metropolitan context of the city of Amsterdam are home to an increasingly diverse student population, particularly in terms of ethnic background, home language and religion. This diversity is accompanied by increasing inequality of educational opportunities, with students from migrant and lower-SES families having less favorable school careers (Inspectorate of Education, 2016). Many teachers experience a lack of agency and report feelings of uncertainty about how to best support all learners in these circumstances (Gaikhorst and Volman, 2023). We approach diversity and equity from a social justice perspective, which implies attention for mechanisms of inequality at a systemic level and for mechanisms through which education itself may reinforce inequities, such as lower expectations for students from migrant or lower-SES families (Cochran-Smith, 2010). Through our collaboration we wanted to strengthen the agency of teachers and researchers to contribute to social justice, by collaboratively designing and evaluating educational approaches for responding to equity challenges.

Establishing the ERLA was in line with international developments; new kinds of collaborations between educational researchers and practitioners have occurred in several places (e.g., Jarl et al., 2024; Penuel et al., 2020). The shared principles of the collaborative approaches that are discussed in Penuel et al. (2020) and on which we elaborate below – a commitment to the collaborative nature of research, a focus on addressing problems in educational practice, an orientation on designing and testing practical solutions, and a number of specific demands on research - largely correspond with what we intended to do in our ERLA. We aimed to realize the advantages that are often attributed to Research-Practice Partnerships (RPPs), such as research that is relevant for school practice, usable innovations, and integration of research into school decision-making (e.g., Tseng, 2012; Donovan, 2013). Our additional intention was that our collaboration would harness the agency of all participants, teachers and researchers, in the sense of their capacity to actively shape their own professional actions, in this case those related to diversity and equity, taking into account the constraints of their work environment and simultaneously shaping that environment (Priestley et al., 2016).

However, these outcomes are not realized automatically; they emerge through a process that involves challenges, tensions, and negotiation. Insights from ten years of ERLA show how understandings of diversity, equity, and research–practice collaboration can evolve through such negotiations. This paper examines how principles of equitable collaboration have been shaped in ERLA, how this promoted (the participants' agency in relation to) diversity and equity, which challenges we encountered and which lessons we learned. Penuel et al.'s (2020) framework of RPP principles is used as a lens for structuring our analysis.

Collaborative research to overcome the research-practice gap

The gap between educational research and practice has been seen as a problem for quite some time. On the one hand the problem has been framed in terms of too limited knowledge utilization by teachers and barriers for teachers to access knowledge (Lysenko et al., 2014; Van Schaik et al., 2018). On the other hand it has been pointed out that educational research often focuses on narrowly defined questions about outcomes and impact that are considered relevant in the academic world, with researchers tending to prioritize publishing in academic journals over ensuring the relevance and meaningfulness of their work for participants in local educational settings (Akkerman et al., 2021), and presenting their results in ways that are accessible for teachers (van Schaik et al., 2018).

Since the beginning of the century also various proposals have been made that aim to bridge the gap (Broekkamp et al., 2009). In an early review study, Hamsley-Brown and Sharp (2003) already pointed to individual teacher and school organizational factors, the need to make academic knowledge more accessible for teachers, more practice-based research designs, and for better communication between teachers and researchers. Structural collaboration, such as school-university partnerships, was increasingly proposed as a

strategy to bridge the gap between educational theory and practice (Van Schaik et al., 2018).

A parallel development, contributing to an increased popularity of collaborative arrangements of schools and research institutes, were the pleas for a culture of inquiry in schools (Katz and Dack, 2013; Godfrey and Brown, 2019). The notion of a culture of inquiry has different aspects, where some authors emphasize the aspect of a reflective, inquisitive attitude in school teams (Cochran-Smith, 2010), while others mainly encourage the use of school data, such as test results (Katz and Dack, 2013) or existing research (Madgwick et al., 2023) for decision making. Teachers conducting research themselves, often in collaboration with researchers, is also seen as an aspect of a culture of inquiry (Baan et al., 2018).

The Dutch educational research labs were primarily meant to involve teachers in collaborative, practice-based research, thereby giving them a greater say in what was being investigated, which in turn was supposed to increase the impact of research on educational practice and contribute to a culture of inquiry. However, inspired by international developments (e.g., Cochran-Smith and Lytle, 1993), participating in research was also presented as an innovative form of teacher professional development, that allows teachers to reflect on and enhance their practice alongside researchers.

The underlying ideas of the Dutch educational research labs were largely in line with the eight principles, grouped in four themes, that Penuel et al. (2020) identified, based on an analysis of collaborative research approaches that are based or originated in the US. The first theme emphasizes collaboration: engaging participants as partners (principle 1) and accounting for their roles and expertise (principle 2). This was the basic idea of the Dutch educational research labs, concretized in the requirement in the call for proposals for these labs to explain the expertise of each partner in the research lab and how they would contribute to the research process. The second theme emphasizes the importance of addressing real-world problems in educational practice. This firstly entails centering the research around problems that matter to a broad range of stakeholders (principle 3). The call for proposals for the Dutch educational research labs addressed this by requiring an explanation of the 'problem articulation', i.e., who had been involved and how in the process of identifying the problems that would be addressed. Another aspect of this theme in Penuel et al.'s (2020) framework, which was less prominent in the Dutch approach however, was attending closely to the specific context in which a problem occurs (principle 4). The third theme that Penuel et al. (2020) identified, highlights designing and testing solutions of practical value (principle 5). This principle was reflected in the Dutch call for proposal in questions about the expected practical outcomes of the research and how the resulting knowledge and practical products would be shared with potential users. Principle 6, pointing at awareness of gaps between intended and actual results, was not an issue yet at the stage of proposals for educational research labs. Penuel et al. (2020) also propose two demands related to the quality of collaborative research. The research plan should include specific, logical, and coherent strategies for several stages of the research process (principle 7), and the research should also provide value beyond the immediate partnership (principle 8). These issues were to be addressed in the methods section of the proposals for the Dutch educational research labs and the section on knowledge sharing with the broader educational field, respectively. However, as we will show in this paper, these principles and requirements are no guarantee for their smooth enactment, as became evident over time.

Diversity and equity in the Dutch context

In the same period in which educational research labs emerged, educational inequality (*kansenongelijkheid* as the phenomenon is called in The Netherlands) also regained political and societal attention. It became clear that previous policy had not succeeded in diminishing educational disparities between students whose parents have different educational levels. Rather, increasing diversity in Dutch society—largely driven by immigration—has introduced additional layers of complexity. Immigrant students often face language barriers and unfamiliarity with the school system, while students from minority ethnic backgrounds may encounter lower expectations or cultural biases. In 2016 the Inspectorate of Education published an alarming report, showing increasing inequality of educational opportunities (Inspectorate of Education, 2016), and since then it has annually pointed out the less favorable school careers of students from migrant and lower-SES families. This was reflected in increased attention to inequality of educational opportunities in research, where grants became available for studying inequality-related questions.

Conspicuously, this occurred simultaneously to another trend in Dutch society since the beginning of this century: growing negative attitudes towards diversity and immigration in public discourse and politics, which resulted in a decline of support for multicultural (educational) policies (Banting and Kymlicka, 2013). This also affected teacher education, where courses and teacher professional development focusing on multiculturalism disappeared, reducing opportunities for teachers to enhance their skills in effectively responding to classroom diversity (Gaikhorst et al., 2019; Severiens et al., 2013). Several studies have shown that (student) teachers acknowledge the existence of inequality, but struggle to understand it in structural terms (Hosseini et al., 2025) and are unaware of how their own practices can unintentionally reinforce inequalities (Van Vijfeijken et al., 2024).

We chose diversity and equity as focus for the ERLA, as it became apparent that teachers in Amsterdam embraced the importance of providing equal opportunities to their increasingly diverse student population, while also recognizing the challenges involved in fulfilling this responsibility (Gaikhorst and Volman, 2023). Research showed that this may even be a reason for drop-out of beginning teachers in urban areas, when they feel unable to meet the needs of all their students (Gaikhorst et al., 2016). We agreed that we would approach diversity and equity from a social justice perspective, with attention for both redistribution and recognition, including mechanisms of inequality and inequity at a systemic level (Fraser, 1995). For our research, this meant that our focus was not only on ensuring equal access to educational opportunities but also on acknowledging and respecting students' diverse identities and experiences, while remaining attentive to mechanisms through which education itself can reinforce inequities, such as lower expectations for students from migrant or lower-SES families (Cochran-Smith, 2010).

The present study

In this context of debate about the educational knowledge infrastructure and concerns about how to respond to diversity in education and foster equality of educational opportunities, we started an educational research lab with a focus on diversity and equity in primary education. With the ERLA we aimed to support teacher

agency in navigating diversity and enhance equality of educational practitioners and researchers through collaborative research endeavors. In this paper we reflect on the work we did in the past nine years and the approach of teacher-researcher collaboration that we developed. We will answer the following research questions:

1. How did the Educational Research Lab Amsterdam (ERLA), as a collaborative research partnership, evolve in practice?
2. How did this collaboration foster agency in relation to diversity and equity?
3. What challenges emerged in the collaboration, and what lessons regarding (a) teacher–researcher collaboration and (b) diversity and equity can inform the design of future collaborative research initiatives?

We present our reflections as a case study of the ERLA.

Context of the study

This study is situated in Amsterdam, the capital of the Netherlands, a city notable for its high level of diversity. Since 2011, no single ethnic group has formed a majority, making it a majority-minority city (Crul et al., 2013), comparable to cities such as New York, Toronto, and São Paulo. Urban schools, including those collaborating with ERLA, sometimes enroll students from more than 100 different nationalities. Students exhibit considerable variation in ethnic, cultural, religious, and linguistic backgrounds, ad SES varies both between and within groups. This intricate mix of diversity is commonly referred to as 'superdiversity' (Vertovec, 2007).

The Dutch educational system is largely decentralized: schools have considerable autonomy in curricular and organizational matters. While ERLA is not entirely unique in the Netherlands - several other initiatives also aim to foster research-practice partnerships – it stands out for its longevity and its specific focus on diversity and equity.

Methods

Data

For answering our research questions, we analyzed several types of data that we produced and collected over the years.

(1) Papers and tools explaining our approach, namely:
Booklet: The ERLA Approach. In 2024, we realized that it was important to be explicit about our approach and its underlying principles, so that potential new collaborators knew what they could expect. We therefore described our approach, its core principles, the research methodology, and the organizational structure that supports these processes in a booklet. In the results section we discuss the ERLA approach in more detail.
Six 'quality cards'. In 2023/34 we made our working procedures more explicit and established agreements on how to approach key aspects of our work, such as acquiring new research projects, conducting research, and wrapping up projects. The idea to record these agreements in 'cards' was borrowed from a primary school, that had developed 'quality cards' for quality assurance (Naaijkens and Bootsma, 2025). The reason for and process of developing these cards are discussed in the results section.
Vision document Diversity and equity. At the start of the ERLA a vision on 'diversity and equity' was formulated jointly by teachers and researchers in a document, including a 'diversity canon'. This 'canon' documented our conceptualization of concepts like inequality of opportunities in education, culture, racism, etc.

(2) *Minutes of the 2-h meetings of the coordinating group (N = 21, 3 per year) and the steering group (N = 14, 2 per year);* also minutes were available of some meetings of research teams. For an explanation of these groups and teams see the results section.

(3) *Accountability documents* written for funding agencies and an *external evaluation report* (de Geus et al., 2023). Final reports of each ERLA project, documenting financial expenditures, activities undertaken, and outcomes achieved, were required by the agencies that funded subsequent ERLA projects. Most of these documents also include reflections on the collaboration and research process. Until now, ERLA has conducted its work through six projects, accounted for in six documents.

(4) The authors have each *made notes and written e-mails* on issues concerning the ERLA since the start of the first project.

(5) *Interviews* with teachers and teacher *questionnaires* from each of the ERLA-projects; in total 114 teachers were interviewed and 184 teacher questionnaires were collected.

(6) *Project documents:* research proposals ($N = 7$), research reports ($N = 6$), practice-oriented publications ($N = 11$), scientific articles ($N = 6$).

Analysis

For this study, a qualitative, thematic analysis was performed using Penuel et al.'s (2020) dimensions as guiding categories. Several types of documents, interviews and questionnaires were used (data triangulation), aiming to increase the trustworthiness of the findings. For answering research question 1 (how did the partnership evolve), the 'ERLA Approach' booklet and the quality cards served as the basis. Additionally, excerpts that concerned the (development of the) ERLA approach were selected from the meeting minutes, research proposals, reports and articles about ERLA-projects, and thematically analyzed.

Research question 2: The 'ERLA Approach' booklet and the quality cards were also used to describe how we intended to ensure equity among the ERLA-participants. The Diversity vision document was used to describe how we intended to foster the participants' agency in relation to diversity and equity in educational practice. The interviews with teachers (that had been recorded and transcribed verbatim) and reports on questionnaire data were screened for excerpts addressing whether and how participating in ERLA-research had contributed (or not) to their agency in relation to diversity and equity; these episodes were also thematically analyzed. Additional evidence for whether and how such agency was fostered in ERLA was collected from the external evaluation document.

Research question 3 was answered through a thematic analysis of minutes of the coordinating group and the steering group,

accountability reports, the discussion sections of research reports, as well as personal notes and emails. These documents were reviewed to identify events, interactions, or reflections that revealed challenges, tensions, negotiations or accounts of challenges or tensions being resolved. As the ERLA Approach and the quality cards were a response to challenges we encountered, we analyzed these with a view to the challenges and the lessons learned that they described.

To ensure that our analysis did not exclude contradictory evidence, excerpts that deviated from or challenged initial interpretations were retained and discussed among the research team. This reflexive process helped to maintain transparency and rigor in the analysis. Finally, the themes that resulted from this analysis were organized under the main themes and principles from Penuel et al.'s (2020) paper. A first draft, written by two of the authors, was discussed within the research team and completed and refined upon their comments.

Ethical considerations

All ERLA projects were carried out with ethical approval from the UvA ethics committee and informed consent from all participants. Questionnaire data were anonymized and interview data were pseudonymized in the original projects. In the present study documents were used that were initially not meant to be used as research data. To protect the privacy of the participants in meetings or individuals mentioned in emails or notes, we did not use illustrative quotes from these data, but only used them to identify generic themes. In reporting on this study we have aimed to be transparent about our positionality, and given our dual role as researchers and participants in the object of study, ERLA, we carefully reflected on potential biases.

Findings

A commitment to the collaborative nature of research

How was collaborative research shaped in the ERLA?

In ERLA, an *organizational structure* was developed that supports a culture of equality. In Dutch there are two words for equality, 'gelijkheid' (sameness) and 'gelijkwaardigheid' (being of equal worth). We used the latter for our collaboration. In terms of Penuel et al.'s framework, the organizational structure and culture were intended to create space for agency of all participants (principle 1). The ERLA is organized in such a way that at all levels and in all phases and forms of collaboration (agenda-setting, writing research proposals, conducting research, interpreting findings, sharing knowledge) educational practitioners and researchers have an equal say in the ERLA's research activities. We explain the organizational structure (see Figure 1) of the ERLA below.

At the *project level*, there is input from both practitioners and researchers in design, development, evaluation of educational approaches and interpretation of research results in each ERLA-project. ERLA-projects are carried out according to a structure with school-based learning teams and cross-school thematic teams, supported by researchers, each having their own roles and responsibilities.

The learning teams develop, implement and evaluate educational approaches that are relevant for their school and contribute to an answer to the overall research question of the project. A learning team consists of a number of teachers from one school (3–5) and often a student from an academic teacher education program. In some schools the principal (or adjunct) joins the learning team. Each

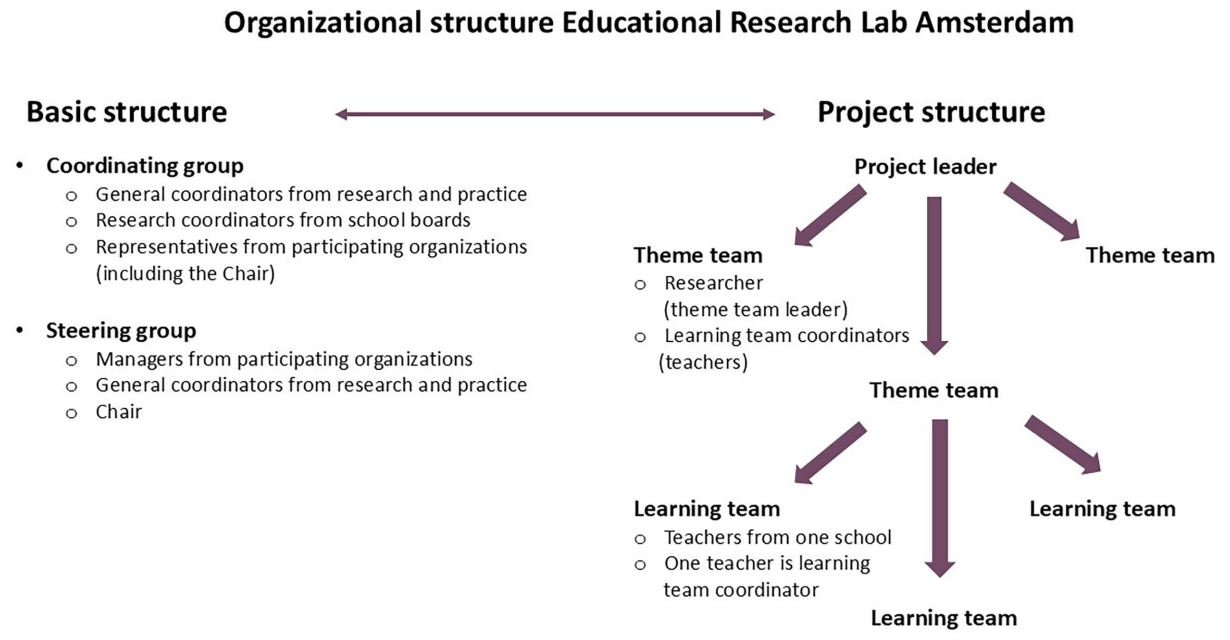

FIGURE 1
Organizational structure of the Educational Research Lab Amsterdam.

learning team has a coordinator, one of the teachers, who coordinates the team's meetings and research. A researcher from one of the participating research institutes is attached to each learning team (as research coach). The learning-team coordinator and the researcher are the linking pins between the learning team and the theme team. Teacher interviews, questionnaires and notes from project meetings show that for the learning-team coordinators the 'gelijkwaardigheid' between researchers and teachers, the mutual exchange of expertise and experience, and the theoretical input (for example, in the form of literature suggestions) is crucial.

A theme team includes the learning-team coordinators of learning teams that are focusing on the same theme, and is thus a cross-school team. It usually consists of the coordinators from three or four schools, a researcher who has expertise on the theme of the team and who acts as a research coach. A theme is a specification of the central topic of the project. In the project that focused on equal opportunities in education for example, theme teams addressed the topics of teacher expectations, students' funds of knowledge and multilingual pedagogies. Theme teams meet five or six times during a school year. Based on literature and experiences in educational practice they develop the outlines of educational approaches, which are then further concretized in the learning themes so that they fit the context of the participating schools. For example, participants of the Funds of knowledge theme team first exchanged the needs they had identified in their schools, they collectively studied literature on Funds of knowledge and identity (FoK/I), and suggested different approaches to working with students' FoK/I. Theme teams also develop the research approach that is used to evaluate the practicality and effectiveness of the educational approaches and get a better understanding of their underlying mechanisms. In the case of FoK/I, the team suggested to not only collect interview and questionnaire data, but also conduct observations in lessons in which teachers worked with students FoK/I. Thus, the theme team meetings provide input for the learning teams and vice versa. The team members also contribute to knowledge sharing activities in their own school and school board and at conferences and other external meetings. For example, a researcher and school-based coordinator from the FoK/I theme team together presented the project at a national conference organized by the Netherlands Initiative for Educational Research (NRO). The researcher who participates in a theme team also acts as a theme coordinator. This role implies preparing the theme team meetings, coordinating research activities and coaching the learning teams.

In each project, also plenary meetings are organized in which the theme team members of all themes participate, and which are also open to other members of the learning teams. In such meetings theme teams exchange the progress they made. Also experts are invited to provide substantive input for the educational approaches.

Each project has a project leader who monitors the project progress, facilitates communication between project participants, and handles prerequisite and administrative tasks. The project leader also plays a crucial role in upholding shared principles within the partnership and acting as a liaison to external stakeholders, including funding agencies.

At the *ERLA-level* an equivalent input of all partners is secured by the following roles and bodies:

The ERLA has two general coordinators, one appointed at one of the school boards and the other appointed at one of the knowledge institutes. The coordinator from the school boards holds regular alignment meetings with managers and research coordinators of the school boards, during which they identify needs of the schools and discuss how these could be addressed through our projects. The general coordinators take care of connection between the projects and the partners, internal and external communication, and continuity of the ERLA.

A coordinating group monitors the progress and the quality of the ERLA-projects and prepares new grant applications. This group also takes initiatives to improve the overall quality of the work of the ERLA, such as developing a joint research agenda and quality agreements for several phases in the work of the ERLA (see below). The coordinating group meets three times a year and sometimes joins the steering group meetings, and is informed by the project leaders about the progress of the projects. In preparation for the coordinating meetings members consult with those responsible within their organizations. The coordinating group consists of the general ERLA-coordinators, the research coordinators of the participating school boards and representatives of each knowledge organization.

The school board research coordinators deserve special attention here. All members of the coordinating group are a linchpin between the ERLA and the (educational or research) policy of their institution. The school board research coordinators, however, responsible for research within their school boards, also play an important role in the practical organization of the projects within the schools. They know the schools well: what challenges they face, what knowledge might be helpful, which teachers might be interested in a specific project, and also whether more urgent issues should have priority above participation in a research project. If participation of a school in a project stalls, they discuss this at the school and try to find a solution, such as adjusting the schedule, reallocating responsibilities, providing additional support to teachers or searching for substitute schools and teachers.

A steering group, consisting of managers from the participating organizations, monitors the achievement of the goals of the ERLA, approves the research proposals that are submitted in name of the ERLA, including the budget, and all other products prepared by the coordinating group, such as – in he past few years - the quality agreements and the research agenda. The general ERLA coordinators and the chair of the ERLA are present at the meetings of the steering group to inform its members abut the progress of the projects and the activities of the coordinating group.

In line with Penuel et al.'s principle 2, the role and contributions of partners are made visible in all phases of a project. In all ERLA research proposals expertise and role of all participants was explained in the 'problem articulation' and 'composition of the research consortium' sections. If a call for proposals allowed, budget was requested for researchers, teachers and - if applicable - other participants. In our products (guidelines, handbooks, articles, podcasts, video clips) everyone's contribution is mentioned, though in different ways. Most practice-oriented products were co-authored by teachers, in scientific articles their contribution was mentioned in the text, but individuals were not mentioned. Teachers and researchers who collaborated in an ERLA-project organized workshops together at education conferences or local professional development activities, for instance a workshop on multilingual education initiated by the municipality.

Challenges we encountered and lessons learned

Creating an organizational structure and formulating principes that support a culture of equality are essential, but do not guarantee a well-functioning equitable workplace as a matter of course. Over the years, we encountered various challenges, that compelled us to reflect. Challenges, for example, occurred when we needed to develop a new research proposal to continue ERLA's existence. As the ERLA does not have structural funding, we needed to apply for new funding when the first project was ending. An opportunity to do so occurred when a call for proposals for practice-oriented research was published by the Netherlands initiative for educational research (NRO). However, this call had different conditions and aims than the call that had provided the funding for establishing the ERLA.

One challenge concerned the distribution of the budget. The first grant had provided ample budget for schools. According to the new call, however, the main part of the budget was to be allocated to the researchers' activities and there was little room for funding teachers. This yielded vigorous discussions in the coordinating group about the character of our partnership: are we really collaborating 'gelijkwaardig' if this is not reflected in the budget? We ultimately found common ground in the principle that all participants should be allowed time in their annual planning for their role in the project. If a grant does not provide this, co-funding by school boards or research institutes may be sought, or the ERLA must refrain from participation. The lesson learned was that, although we aim for a fair distribution of financial resources, unequal distribution of resources does not necessarily signal inequality in our partnership, but may reflect the conditions of a call. In later situations where a grant did not allow funding for teachers, school boards have been willing to facilitate participation of teachers, using professional development funds that schools in the Netherlands receive.

A tension for the researchers that became apparent when we were applying for new funding, concerned the small scale and lack of methodological rigor of the school-based studies of the first project. This made it difficult for some researchers to defend that they spent their research time on ERLA-work. The first call required that the research focus on questions identified by the participating schools and had been conducted by teachers. This resulted in a variety of small-scale studies under the heading of 'diversity' into topics including educational partnership with parents, citizenship education and highly gifted students. According to internal and external evaluation, the studies yielded valuable insights for the schools and the research process harnessed a culture of inquiry in the schools. However, the questions and results were not always meaningful for other schools and the studies did not meet the quality standards of scientific journals. The new call required a research question that built on the state of the art in educational sciences and scientific output had to be anticipated. This made participation more attractive for researchers. The representatives of the schools, however, felt that ownership of the research was shifting back to the researchers. This yielded dialogue in the coordinating group about what makes research meaningful for whom, and resulted in a better mutual understanding between teachers and researchers of what was needed for them to experience ownership. We thus learned that problem articulation is not a matter of researchers helping teachers or schools to articulate their questions but a two-way process in which schools express their questions, needs and experiences, and researchers suggest research questions that may address these, while taking into account what insights are already available on the topic, thus making the question scientifically relevant as well. In the case of the ERLA's research on Funds of knowledge, the process started with a researcher proposing a theory that inspired teachers to formulate research questions for their own practice.

The dialogue about ownership and meaningfulness also helped clear up a misunderstanding. It appeared that researchers were sometimes hesitant to provide theoretical input because they found the schools should be leading, whereas teachers actually expected more theoretical input from researchers. Our discussions eventually resulted in the approach described in the 'ERLA approach'. The coordinator (also the first author of this paper) drafted its first version, which was then reviewed, refined, and formally approved by the members of the coordinating and steering group. This approach is based on 'acknowledged difference' between researchers and practitioners instead of 'equality'. With this phrase we refer to the different kinds of expertise in our partnership, that we are now less hesitant to connect with different roles and responsibilities in a project. Researchers contribute theory, actual insights from research and methodological expertise. Based on these we develop and evaluate feasible educational approaches tailored to the participating schools' visions and student populations. In this process, researchers assume responsibility for the research: they propose a research design and measurement instruments. The teachers assume responsibility for the design of educational approaches. An important lesson learned is that collective agency is fostered when participants contribute to the development and evaluation of educational approaches from their respective strengths and areas of expertise.

The incidents around the new research proposal also made us realize that, although we had a well-functioning organizational structure for carrying out research, we did not have procedures for acquiring research funding, and as appeared later, for wrapping up a project. Dialogue about questions such as how to decide who would assume the role of project leader, how to divide the budget, and how to maintain shared ownership and create room for dialogue when a research proposal has to be submitted under time pressure, eventually resulted in the idea to develop 'quality cards'. These cards describe procedures for several aspects and phases of the research process, e.g., acquisition, data collection, financial accountability, in terms of roles, tasks and responsibilities. The topics of the quality cards were chosen in 2024 in a meeting of the coordinating group. A first draft of each quality card was written by two or three members of this group and the cards were adapted after discussion in the coordinating group and approved in the steering group. These quality cards have proven useful in helping us to adhere to our principles in a context that is not always attuned to the kind of collaboration that we envision. Moreover, we sometimes need to be explicitly reminded of those principles. The quality card about data collection was developed, after an incident during one of the projects, where one of the schools refused to administer an essential questionnaire since it did not correspond with the school's educational vision. It appeared that not all schools had been involved in the choice of research instruments. Although the school opted out of participating in the questionnaire, the discussion about the incident clarified the perspectives of teachers and researchers and highlighted the importance of co-development and mutual exchange from the early stages of a project. In a subsequent project teachers and researchers collaboratively simplified the wording of a questionnaire, added visual cues and smiley-based response options, and developed instructions to guide students through each question,

after a teacher had argued that the intended questionnaire would not yield valid responses, considering her students' proficiency in the Dutch language. Researchers and teachers emphasized that without this joint effort, the approach could not have been properly evaluated, illustrating the importance of co-creating tools to ensure validity.

A final challenge concerned the integration of new partners in he ERLA. This challenge occurred when a call for research proposals required the inclusion of new partners in the consortium, which we welcomed as we were eager to share our approach more widely. However, newly participating schools and school boards were not always familiar with learning teams, the idea of a culture of inquiry and debates about diversity and equity, which caused tension within the consortium. Schools that had been participating from the start felt they needed to pause their progress so that new schools could first establish a clear understanding of the foundational principles of the ERLA. This challenged our ideas about inclusion and equal partnership, and yielded a question about how to remain true to the ERLA-principles, while also being open to new participants. The 'ERLA approach' and the quality cards proved useful here, as they explain the principles that we consider essential and show how we intend to make them practical, thus enabling potential new participants to check whether this fits their perspectives and needs, and providing a starting point for dialogue.

A focus on addressing problems in educational practice

How was addressing problems in educational practice shaped in the ERLA?

ERLA's starting point is that scientific theories and insights from research are not always directly applicable to solve problems in everyday educational practice. They are sometimes too abstract or do not fit well with the Dutch context or the specific context of a school. Schools also encounter problems or questions about which little research is available. In the ERLA, teachers and researchers have jointly developed ways of making theory practical and investigating specific applications of theory in different contexts, thus in turn contributing to theory. For example, teachers from different schools and researchers co-designed lesson plans that made theories about high expectations practical, by explicitly setting challenging yet achievable goals for all students. They observed how students responded, collected evidence on engagement and learning outcomes, and discussed these observations in team meetings. This allowed them to refine both the instructional strategies and theoretical understanding of how high expectations can affect student engagement and achievement.

Since the start of the ERLA, we have addressed themes that are relevant in a metropolitan educational school context, and that both school (board)s and knowledge institutions considered important (principle 3). Over the years, these were diversity, high expectations, students' funds of knowledge, multilingualism, and various themes related to reading from an equity perspective. The intention to address problems in educational practice concerning diversity and equity that we all found important, has also required us to define what we considered as problems, and how we understood them in terms of causes and possible solutions. During the first ERLA project, a document was written by teachers and researchers in which we explained and substantiated with literature our vision on equity and diversity. Here, we list the most important principles discussed in that document, and show with examples how we have shaped them in our research projects as evidenced in various sources we have studied.

First of all, researchers and practitioners chose to approach inequality in education with an emphasis on the values of social justice, acknowledging the need of both redistribution and recognition, and addressing the mechanisms through which education itself may reinforce inequities. We drew on Banks (2004) dimensions of multicultural education to understand the structural character of inequity, and how practices in schools and classrooms can reproduce inequity, but can also contribute to countering it. For example, we looked critically at the practice of assigning students to different ability tracks; a practice that aims to promote equality, but has been shown to result in larger disparities in educational outcomes between groups of students (Francis et al., 2017). We investigated how teacher can build on students' funds of knowledge ('t Gilde and Volman, 2021). And whereas research into educational equality usually focuses on academic achievement of students from a migrant or lower-SES background, we also looked at well-being-related outcomes: students' engagement, well-being, etc. (Veerman et al., 2023). We were aware that research can contribute to perpetuating inequality, too, and tried to be conscious of the implicit norms embedded in measurement instruments; for example, cultural norms embedded in questions or examples, or the use of complex language.

A second principle was to recognize and embrace diversity in the classroom as a complex, multifaceted strength, rather than viewing it as a challenge or problem. We felt strengthened by Vertovec's (2007) and Crul et al.'s (2013) analysis of the multidimensionality of diversity, that we observed in classrooms and schools in Amsterdam as a superdiverse educational context, where students differ on many dimensions. Students identify with or are identified by social categories like gender, SES, ethnic background, religion etc., but they also differ in individual characteristics like personality, cognitive capacities, interests etc. In our ERLA projects, participating teachers and researchers saw this diversity as a possible source of learning, and shared the belief that making room for what students bring into the classroom in terms of different perspectives, knowledge and experiences enriches teaching and learning. We were motivated by Valencia (2010) to take an explicit anti-deficit stance towards inequity: those who suffer from inequity should not be blamed for it. We were also aware that this should go beyond a celebration of difference, and is basically about appreciation and recognition of the experiences, knowledge and skills of all (including minoritized) students. And that taking diversity into account also entails being aware of the harsh living conditions of some students that are caused by societal inequalities and injustice.

In an external evaluation (de Geus et al., 2023) it was concluded that the work of the ERLA represented a paradigm shift concerning equal opportunities in education. It was pointed out that traditionally, deficit thinking has been dominant in the equal opportunities debate in the Netherlands, in which students with limited proficiency in Dutch or challenging home circumstances were seen as needing to be compensated for this at school. In the ERLA, however, teachers tried to reinforce what children already know, can do and bring from home. The evaluation showed that this positive approach had had an impact on the mind set and teaching of teachers. As a school director commented: "In ERLA there is more 'educational optimism' and belief

in the developmental power of students". A teacher who worked on high expectations mentioned that, through collaborative study of the literature on high expectations with fellow teachers and researchers, and through the sharing of experiences, she began to differentiate instruction in another way: "Instead of always putting a student in the lowest ability level group, I now look at where they need extra help. […] And then I say: It's not that you are bad at math, but this part you'll practice more. You can grow and improve. This made the students more motivated too".

A third principle was that social justice also requires a critical consciousness of our own perspectives, values and prejudices (Gorski and Dalton, 2019). In our discussions and writing about diversity issues, individual and group differences, and school populations, we as researchers and practitioners from ELRA have strived to be as specific as possible in referring to what we mean and to avoid generalizations. For this reason, we avoid terms such as 'white and black schools' and 'ethnic minorities' which are quite common in Dutch educational discourse. We adopt an approach that emphasizes the strengths and potential of diversity or centres on the pursuit thereof. Moreover, we aim to highlight the agency of actors regarding diversity through our choice of language. For example, we decided to use expressions like 'doing justice to diversity' and 'opportunities' in our dialogue, rather than phrases such as 'dealing with diversity' or 'managing differences' and 'educational disadvantages'. In the 'diversity canon' we have described the terminology we use for various diversity- and equity-related concepts and themes that appear in our projects (such as multilingualism, multiperspectivity, funds of knowledge, equal educational opportunities), along with definitions of what we mean by them. In a meeting of one of the theme teams in the reading project this awareness of language sparked a conversation about the term 'language deficits' of students that some participants used. In the end the group concluded that speaking of deficits did not do justice to the home languages that children do master, and the team decided to explicitly refer to *deficits in Dutch language proficiency* and to adopt a multilingual approach that builds on students' existing linguistic resources.

Attention to context (principle 4) is a basic principle of ERLA. All projects aim to translate insights from theory or previous research to the specific contexts of the participating schools. Because the teaching approaches we develop are applied by teachers in different schools with various student populations and pedagogical visions (traditional, Montessori, Dalton, etc.) we gained insight into modifications that may be needed in particular circumstances, for instance adjusting the approach for immigrant students who do not speak the Dutch language. Recent projects were inspired by the principles of design-based implementation research (Penuel et al., 2011). In those projects we worked with so-called precursor and follow-up schools (schools that start with the approach and school that follow later). A developed educational approach was first designed and evaluated in part of the participating schools (the precursor schools). Then the approach was evaluated and – if necessary - adjusted, and then tried again in the other schools (the follow-up schools), where adjustments were made again to make the approach usable and successful in the specific context of these schools. This has provided a lot of insight into what works in a particular context and why. Since several schools participate in a theme team, and each implements the approach in its own way, we could develop a range of educational materials that illustrate different ways in which theoretical insights (e.g., about high expectations or working with students' funds of knowledge) can be made practical. For example, in the early phases of our research on working with students' funds of knowledge, we collaborated with schools that employed a learner-centred pedagogy, which resulted in suggestions for relatively flexible ways to engage with students' funds of knowledge. During discussions with teachers from schools with a more textbook-driven curriculum, it appeared that this approach did not fit easily within their routines. Teachers mentioned that they needed concrete examples of how to integrate the approach into their lessons. Therefore, teachers and researchers also co-designed concrete funds-of-knowledge activities that could be used into a textbook-driven program.

Challenges we encountered and lessons learned

As described above, the problems under investigation were initially not always relevant for a broad range of stakeholders - less so for other schools and researchers. After a period when the schools' questions were leading the research, we now choose to work with a common theme in each project, to which both schools and researchers commit. Responses in the coordinating group and interviews with teachers from the theme teams showed several advantages of this approach. First, it appeared to provide more opportunities for mutual exchange between schools and learning from each other. Second, it enabled targeted theoretical input and feedback from researchers. Participants thought that it also made it more likely that the results of the research were relevant for other schools and researchers saw opportunities to publish about the research. Larger projects now often work with sub-themes within an overarching theme. In a project that was funded with an 'Equal educational opportunities' grant, for example, theme team of teachers from different schools were formed around the three sub-themes that were mentioned before (multilingualism, high teacher expectations and funds of knowledge), after these were identified on the basis of an inventory among school boards.

We also learnt lessons about how to determine which problems to focus on in ERLA research. Above, we already discussed that having to respond quickly to calls put pressure on our principles. We have now partly overcome this by drawing up a joint long-term research agenda to which the participating school boards and knowledge institutions have committed themselves, with themes that are also part of the strategic plans of the school boards. This research agenda was used, for example, in a meeting of the coordinating group where it had to be decided whether the ERLA would apply for funding in a particular call. The quality card on acquisition of research funding has also proven to be helpful; in the last research proposal we developed (for the reading project), it ensured that all steps needed to involve all partners were taken when making choices.

A final learning point is that it is important to invest in the involvement of school leaders and administrators in ERLA research. During interviews and project meetings teachers indicated that they needed support from the school leader, both in terms of providing time (to develop approaches and participate in project meetings) and in organizing attention around the research theme within the school. In ERLA-projects, school leaders played an essential role in facilitating, supporting and encouraging participating teachers. They were also important in engaging other team members, for instance by paying attention to ERLA projects during team meetings or in professional development activities. Some school leaders also used the research to

inform school development. This required that the problems that were investigated in the ERLA aligned with the agenda of the school boards involved. An example, where ERLA research contributed to educational improvement at supra-school level, is how the notion of building on students' funds of knowledge has found its way into the policy of one of the school boards. The process began with teachers developing an approach on funds of knowledge within a theme team. With the support and encouragement of the school leader, teachers shared the approach within their school. It was then scaled up through workshops at board-wide professional development days, eventually leading to its formal incorporation into the policy of the broader school board. This illustrates how initiatives originating at the classroom level can progressively influence school-wide and schoolboard-level practices and policies.

Investing in contacts with the city council, recently resulted in an ERLA-project on multilingualism being launched, funded by the municipality of Amsterdam, which the municipality aims to use to further develop its policy on this topic.

Challenges did also occur in relation to the 'vision on equity and diversity'. Although the principles of the original ERLA vision document are put to practice in the individual projects, the document is rarely referred to explicitly anymore in the steering or coordinating committees. Given the turnover of participants in both groups and project leaders over the years, there is a risk that the underlying vision and shared foundations may fade into the background, or that new ERLA participants may not fully internalize them. We found indications that this may happen, when the notion of working with students' funds of knowledge was taken up at some schools as 'being attentive to all students' talents', emphasizing individual 'fairness' rather than social justice. Keeping the vision visible and periodically revisiting it could help strengthen the shared framework and support its long-term sustainability.

Currently, part of the coordinating group and steering group members feel that there is room for greater attention to the structural dimensions of inequality. Although the choices made in, for example the 'diversity canon' reflected awareness of the structural nature of inequality, the focus in ERLA projects on what teachers can do in the classroom, has made that the systemic nature of educational inequality was not an explicit part of the discourse within ERLA. Societal developments, such as increased awareness of racism in the Netherlands and the ensuing backlash against 'woke' perspectives, however, have recently fueled the desire of researchers and teachers to further align the ERLA approach with a social justice framework and encouraged them to mention a structural perspective more explicitly.

An orientation on designing and testing practical solutions

How was an orientation on designing and testing practical solutions shaped in the ERLA?

ERLA research has focused on making theory practical and investigating teaching practices in order to contribute to theory building in turn. The methods used to do this incorporated elements of research approaches known in the literature as collaborative action research (Somekh, 2010), educational design research (McKenney and Reeves, 2018) and design-based implementation research (Penuel et al., 2011). With collaborative action research ERLA methods share that teachers jointly investigate their own teaching practice with a view to improving it. From educational design research we derived principles for developing educational approaches: consistency, usability, (perceived) effectiveness and working in cycles of implementation, evaluation and adjustment. Design-based implementation research helped to clarify the importance of taking into account differences in the context in which an approach is implemented. Some projects started with an inventory of existing practices in the schools of the teachers involved. Efforts were also made to determine how teachers shaped the developed approaches in their own practices (implementation) and whether, and in what ways, this led to improvements for students (e.g., effects on wellbeing, engagement, and achievement in particular domains).

The intention of ERLA is to 'provide something of practical value' to both actors in educational practice and fellow researchers (principle 5). The practicality of the educational approaches we develop is enhanced by their alignment with the needs of the participating teachers and their schools. During a project, the teaching approaches are already shared with colleagues through the learning teams, for example during team meetings or professional development activities. In each project, we develop sharable knowledge for teachers, schools and school boards and concrete practical tools that support working with these approaches in the classroom and at school level. An example is a practical handbook with so called 'funds cards'. These cards include concrete lesson examples which can serve as an example for other teachers and schools who want to build on students' FoI. That the developed knowledge is usable for other schools is evident from the large number of requests from other schools (in and outside ERLA) to access the publications. We make the results of our projects available to other schools at the end of each project through publications, podcasts, knowledge clips, and presentations within the participating school boards and for a wider audience. These products are also used in teacher training and in professional development for teachers and school leaders and for underpinning school board policies. For example, in a teacher education program for prospective teachers, a specific module on Funds of Knowledge has been developed, using the outputs of the WOA as its foundation.

We shared our results with fellow researchers at conferences, and we have been increasingly successful in publishing our acquired knowledge and insights in peer-reviewed journals. Information on each research project and its results (practical publications, practical examples, knowledge clips, podcasts, scientific publications), accompanied by background literature, is available via our website. Not only are the practice-oriented publications requested and used by practitioners, there is also demand for our academic articles on the WOA, which are cited in other scholarly studies.

Challenges we encountered and lessons learned

When it comes to gaps between what was intended and what was accomplished and how we account for those (principle 6) - clearly a reference to challenges –, gaps have occurred between our wish to show that the educational approaches we developed improve teaching for students and the lack of research results showing quantitatively measurable effects. However, qualitative evidence from teacher and student interviews, as well as project meeting observations, demonstrated the value and impact of these approaches. While teachers and students clearly mentioned in interviews the improvements they experience by working with these approaches, our quantitative studies rarely showed any effects. Only situational effects, such as increased student engagement during lessons with the developed tools, have been found with quantitative measures (Veerman et al., 2023). For us, this is no reason to

conclude that an approach is not effective and/or should be discouraged. We tried to account for a lack of quantifiable effects in publications, and reflected on possible explanations for the discrepancy between experienced and measured effects. Existing measurement instruments for outcomes such as wellbeing and citizenship attitudes are not always sensitive to the effects we aimed for and that teachers notice (e.g., feeling seen, openness to others' perspectives). Teachers also reported effects for specific individual students rather than the whole group; these would not show when results are quantified. Many projects were short-term, while effects on achievement may require a longer investment.

Specific demands on research

How were the principles enacted in the ERLA?

Each project starts with a research plan (principle 7) detailing theoretical framework, methods and planning. Actually, projects can start only after acquiring funding, which involves a competitive process in which research proposals are reviewed and selected for funding. The type of funding agencies and calls that ERLA focus on, additionally ask for an explanation of what will be done to enhance knowledge utilization. Apart from the requirements of funding agencies, we made our criteria for how we want to engage in collaborative research increasingly explicit in quality cards over the past years, as described above. Specifically, this is always approached from a perspective of ownership, dialogue, and equity, with consideration for approaches that are tailored to the specific context of each school.

Value of ERLA research to others outside the partnership (8) originally received less attention, as the main focus was on questions of the participating schools, but as described above, this has changed after the first project, and ERLA has developed various ways to broader share its insights and results, as has been discussed above.

Challenges we encountered and lessons learned

A challenge related to how ERLA research is of value to others outside the partnership is how to reach schools that do not actively participate in ERLA research. Although products are made available to other schools, this alone is not enough; for teachers to capture the underlying theories of many of our educational approaches, that enables to use them flexibly in one's own context, requires discussion, practice and feedback. There is a demand for professional development activities that provide these opportunities, but this type of activity does not fit within the current funding structure of ERLA. Schools are willing to pay for such professional development, but - although universities are finding impact increasingly important - this is not what they reward their employees for. Strategies are therefore still being sought to share knowledge from ERLA projects more widely with schools that have not previously participated in ERLA workshops. A current initiative involves charting a network of expert teachers and teacher educators who can fulfil this role.

Discussion and conclusion

Amid ongoing debates about the educational knowledge infrastructure and increasing concerns about how to address diversity and promote equity in education, we launched the Educational Research Lab Amsterdam (ERLA), a research lab focused on diversity and equity in primary education. With ERLA, our goal was to enhance teacher and researcher agency in navigating diversity and equity by bridging educational theory and practice through collaborative research involving both practitioners and researchers. This study aimed to provide deeper insight into the development of the teacher–researcher collaboration approach within ERLA. We reflected on the challenges encountered and the insights gained regarding how such collaboration can foster agency in relation to diversity and equity, using Penuel et al.'s 'principles' as a guiding framework. While existing international research on Research-Practice Partnerships (RPPs) also has addressed challenges in such collaborations (Coburn et al., 2013; Coburn and Penuel, 2016; Johnson et al., 2016), it often provides little insight into how participants deal with these challenges through the concrete tools, strategies, and routines they develop (Coburn and Penuel, 2016). This study shows how such challenges were actively managed in ERLA and presents the lessons learned, offering case-based insights into the practical enactment of equitable collaboration.

The analysis shows that ERLA has established a functioning structure and culture that, by securing 'gelijkwaardigheid' at all levels and simultaneously drawing on the unique expertise of both teachers and school leaders and researchers, supports and enhances the agency of its participants in their endeavors to contribute to social justice in education. It enables teachers to develop substantiated educational approaches that fit the needs of their students, and it enables researchers to conduct research that is relevant, as it addresses challenges related to diversity and equity that teachers and schools really struggle with. Results of ERLA-projects are educational approaches to promote equity in schools, concrete tools for teachers, professional development for teachers and school leaders, strengthened school board policies, and scientific publications. Nonetheless, several challenges emerged throughout the process. Below we reflect on these challenges and some of the key lessons learned.

Challenges and key lessons from working in ERLA

A first key lesson is that *recognizing differences in expertise* fosters collective agency. As in previous research (Coburn et al., 2013), we found that collaborating as equal partners to bridge the worlds of research and practice is a challenging endeavor. In ERLA, one way in which this challenge was addressed, was by embedding both perspectives structurally into the partnership, for example by appointing coordinators from both practice and research ensuring equal representation of research and practice in leadership roles. These structural arrangements signaled the value placed on both perspectives and created conditions for genuinely collaborative and equitable decision-making.

However, another way in which we initially aimed for equity in our collaboration, i.e., practitioners assuming researcher roles and researchers trying not to act as experts, turned out to be less effective. Both teachers and researchers were unable to use their specific expertise, and complement and strengthen each other. After the first project we therefore decided to adopt the *principle of acknowledged inequality*, in which researchers retained final responsibility for evaluation and teachers for the instructional approaches. In terms of the 'logics of equity' that Farrel et al. (2023) distinguished, related to

the process of collaboration in RPPs, we returned from collaboration to coordination, i.e., to a more distinct division of labor. Sjölund et al. (2022) suggest that a more traditional distribution of tasks and responsibilities makes it harder to democratize evidence. The way in which our approach developed, challenges this idea, however. It appeared possible to retain joint decision-making in all aspects of the inquiry, design and dissemination work, showing that a more distinct division of roles does not necessarily imply a conventional way of collaborating, where researchers are the experts and teachers the implementers with limited influence (Sjölund, 2023). By clearly defining roles and responsibilities, we ensured that each ERLA participant can work from their expertise and strengths and avoid overload, while both parties' expertise is recognized and valued.

We thus learned that recognizing differences in expertise was essential for fostering collective agency. However, this process was not without tension and struggle around roles and responsibilities. Rather than seeing this as signs of failure, we think that these tensions are integral to collaboration, serving as opportunities for negotiation, mutual understanding, and strengthening shared ownership of the work. Thus a second key lesson was that *embracing tensions is inherent to the process.*

A third key lesson learned was that *a shared vision on both the approach and the object of the collaboration is not self-evident and must be actively maintained over time.* While RPP literature emphasizes the importance of a shared vision (Coburn et al., 2013; Johnson et al., 2016), it pays less attention to how this can be achieved. This study on ERLA demonstrates that establishing a shared vision is a continuous, active process that requires both explicit principles and ongoing dialogue and revisiting, particularly when new partners join. The ERLA started out with a clear 'logic of equity' in its mission (Farrel et al., 2023), namely a focus on social justice, made explicit in a vision document. This document framed differences as a positive asset - corresponding to the second conception that Farrel et al. (2023) distinguished ("identity, culture, and belonging") –, combined with attention to systems and structures that support and perpetuate inequality - the third dimension identified by Farrel et al. (2023). While on the one hand we were successful in making this vision practical, our analysis also showed how we sometimes had to try hard not to slip back into a deficit discourse, particularly when new participants joined the network.

This study thus adds practical insights into the dynamic, process-oriented nature of maintaining a shared vision in RPPs. Equally important as a shared vision are transparent working structures and tools, such as steering committees, learning teams, and quality cards, which facilitate agency by clarifying roles, providing time and space for joint reflection, and supporting open dialogue. These structures also need to be regularly evaluated and adapted in response to changes in context, team composition, and project focus. Together, the active maintenance of a shared vision and the use of transparent, flexible structures create conditions for equitable participation and collective ownership, ensuring that all partners can contribute meaningfully to the development, implementation, and evaluation of educational approaches.

Nevertheless, we continue to face a number of important challenges for the future. One key challenge, already often addressed in studies on RPPs (Coburn et al., 2013) concerns the sustainability of the collaboration: *How can we maintain a structural research-practice partnership without structural funding?* Sustainable financing is essential for the continuity of ERLA projects. So far, ERLA has operated primarily on the basis of temporary project grants, which makes the long-term future of the initiative uncertain. Our ambition is to secure a more stable and long-term foundation for our work. Fortunately, the Municipality of Amsterdam now provides a basic subsidy that supports ERLA's organizational infrastructure through 2027.

A second and major challenge lies in the *recognition of the contributions made through our approach*. Our focus on teacher agency, equity, and local relevance does not always align with dominant, evidence-informed models favoured by policymakers (e.g., Madgwick et al., 2023). While terms like 'intervention' and 'impact' are commonly used in educational research, we deliberately use the term 'educational approach' to emphasize that our pedagogical approaches are not stand-alone activities but integral parts of teachers' dynamically developing practices (Akkerman et al., 2021). Adapting our language in this way, however, made it more difficult to communicate the practical value of our work to policymakers. While many school leaders and school board administrators appreciate our work, securing similar support at municipal and national levels remains difficult. This is exacerbated by the lack of quantitative evidence for the effectiveness of the approaches we developed. While many teachers report meaningful changes in their practice and positive effects for students, these impacts are often difficult to capture through standardized measurements. This highlights the need for broader definitions of impact in educational research, and for recognition of diverse forms of knowledge, including practice-based insights. For ERLA-participants this presents a dilemma: do we want to 'translate' our intentions into a vocabulary of impact that fits dominant funding and policy logics? The risk is that the richness of collaborative inquiry is lost in such a translation. On the other hand, by problematizing and broadening the dominant discourse of impact, we can show how collaborative research addresses dimensions of educational change—such as equity, teacher agency, and sustainable improvement—that outcome-based measures alone cannot capture.

This challenge made us realize how much awareness of structural conditions is not only important to understand the object of our research (equality and equity in education) but also to understand our own collaboration. RPPs operate in a specific cultural, historical and organizational context; in our case this is a context in which a conception of impact of research as a linear one-way translation from research to practice is dominant, which every now and then puts our principles and our collaboration under pressure. In the U. S., the pluralistic research landscape seems to provide somewhat more space for collaborative and design-based approaches. In the Dutch context, the scope is narrower, although this is partially offset by the considerable respect for teachers' professionalism in collaborations with researchers, and by the agency teachers are able to enact and express within these partnerships. This is in line with the Nordic tradition as outlined by Sjölund (2023), characterized by a national curriculum that provides teachers with considerable autonomy in organizing their teaching and learning. This is also reflected, for example, in funding conditions stipulating that part of the research budget must be allocated to teachers.

A third set of challenges, also discussed in earlier work on RPPs, relates to the broader positioning and development of our approach: *How can we effectively reach and engage schools that do not currently participate in ERLA research with the insights we have developed?*

While the ERLA has made significant impact through its direct collaborations with participating schools, a major challenge remains in extending the impact of our work beyond this core group. Only a limited number of schools actively engages in ERLA's projects — due to both school-related factors such as teacher shortage or different priorities, and limited capacity on the part of the knowledge institutes. This raises important questions about how we can make both our collaborative approach and our findings, practical tools, and educational approaches available for other schools.

Limitations and future research

A key limitation of this study concerns our embedded role within ERLA. While this positioning offered an in-depth understanding of processes and challenges, it may have influenced our interpretations. To address this, we triangulated multiple data sources, including reports from external researchers, and engaged in critical reflection on our assumptions. Future research could examine other contexts with both internal and external researchers to provide complementary perspectives.

Writing about our local research lab for an international audience also presented us with challenges. English is the language of international academic communication and the literature on RPPs and equity is mainly US-based. However, relevant terms are not always translatable to Dutch and vice-versa. Crucial terms like 'equity' and 'gelijkwaardigheid', which have no literal equivalents in Dutch and English respectively, are a case in point, making it difficult to convey the nuances in local discussions. We therefore endorse Vetter et al.'s (2022) plea for research by an international team, which would help interpret and discuss equity and justice across international spaces.

Conclusion

This study offers valuable insights into the development of a local teacher–researcher collaboration approach, ERLA. Many of these insights resonate with findings from research into Research-Practice Partnerships (RPPs). What our study contributes to the existing literature is a perspective rooted in a concrete (European) setting, illustrating the realities of developing equitable collaborations. Additionally, it highlights key lessons for fostering successful equitable partnerships—lessons that can inform school leaders, teachers, researchers, and policymakers interested in pursuing similar collaborative initiatives.

Data availability statement

Several sources used in this article (such as our vision and way of working documents) are freely accessible through our WOA website: https://www.woa-amsterdam.nl/. Further inquiries can be directed to the corresponding author.

Ethics statement

Ethical approval was not required for the studies involving humans because this is a second analysis of data that were collected in other projects. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

Author contributions

LG: Methodology, Writing – original draft, Conceptualization, Project administration, Investigation, Funding acquisition, Formal analysis, Writing – review & editing. SC: Conceptualization, Writing – review & editing, Funding acquisition, Validation. HE: Conceptualization, Writing – review & editing, Funding acquisition, Validation. MS: Conceptualization, Validation, Writing – review & editing, Funding acquisition. MV: Conceptualization, Methodology, Writing – original draft, Writing – review & editing, Investigation, Project administration, Funding acquisition, Formal analysis.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The authors declare that Gen AI was used in the creation of this manuscript. The AI tool ChatGPT-4o was used exclusively to identify potential linguistic errors and to suggest improvements for readability. No generative AI tools were used to create or develop any of the original content in this work.

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