



UvA-DARE (Digital Academic Repository)

Educational research labs in the Netherlands: a joint venture in connecting the worlds of educational practice and research

Henrichs, L.; Schot, W.; Zuiker, I.; Bakx, A.; Soeterik, I.; Edzes, H.; Klein, T.; de Jong, A.; Exalto, R.

Publication date

2018

Document Version

Final published version

Published in

EAPRIL 2017, Proceedings

License

Unspecified

[Link to publication](#)

Citation for published version (APA):

Henrichs, L., Schot, W., Zuiker, I., Bakx, A., Soeterik, I., Edzes, H., Klein, T., de Jong, A., & Exalto, R. (2018). Educational research labs in the Netherlands: a joint venture in connecting the worlds of educational practice and research. In *EAPRIL 2017, Proceedings: November 29-December 1, 2017, Hämeenlinna, Finland* (Vol. issue 4, pp. 203-220). (EAPRIL Proceedings). EAPRIL.

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)



**EDUCATIONAL RESEARCH LABS IN THE
NETHERLANDS: A JOINT VENTURE IN CONNECTING
THE WORLDS OF EDUCATIONAL PRACTICE AND
RESEARCH**

Lotte Henrichs*, Willemijn Schot*, Itzél Zuiker*, Anouke Bakx, Inti Soeterik***, Hester Edzes****, Ton Klein*****, Angela de Jong*****,**

Rianne Exalto***⁶**

*Utrecht University, Educational Development & Training, Utrecht, The Netherlands.

L.F.Henrichs@uu.nl

**Fontys Institute for Child and Education, Fontys University, Tilburg, The Netherlands,
a.bakx@fontys.nl

***University of Amsterdam, Amsterdam, The Netherlands. Teacher training department,
I.M.Soeterik@uva.nl.

****Amsterdam School Board for Catholic Primary Education ASKO, Amsterdam, The
Netherlands. h.edzes@askoscholen.nl

*****Oberon research, Utrecht, The Netherlands, TKlein[at]oberon.eu

ABSTRACT

In this paper, we describe an ongoing project in which three Educational Research Labs were created in the Netherlands. The overarching aim of the project is to advance collaboration between educational practice and educational research in a sustainable way. The project consists of three parts, which will each be explained in the current proceedings paper: a) a literature review, resulting in a conceptual model of successful collaborative configurations of partners from different educational fields (i.e. practice and research); b) three educational research labs taking place in three Dutch cities, each of them choosing their own particular focus of attention and their own operating procedure aligned with their research aim; c) a study on a metalevel, in which the educational research labs are evaluated. The paper will close with a comparison of what was stated in the initial model, and what has been found in the metalevel study that evaluates the three Educational Research Labs so far.

⁶The authors stated above contributed to this particular proceedings paper. In addition to the authors stated above, Gea Spaans (po raad) and Maartje van den Brand (Plein013) were also presenters during the EAPRIL 2017 symposium. Claudy Oomen (Utrecht University) and Ditte Lockhorst (Oberon) were involved in the literature study



INTRODUCTION

For many years Dutch higher education institutes and schools have been trying to strengthen the connection between educational practice and educational research. Despite many initiatives, educational professionals in both the scientific domain and the educational practice domain feel that a gap remains between research and practice (Schenke, Geijssel, Volman, & Van Driel, 2017; Vanderlinde & van Braak, 2010). One of the methods to address this has been teacher-led research, an approach has gained popularity in the past decades. Besides the expectation that joint research ventures advance school development, teacher-led research has also been proposed as an effective means for professional development of teachers (Van der Linden, Bakx, Ros, Beijaard, & Keuvelaar, 2015; Zeichner & Noffke, 2001). However, this type of research is often short-term and more oriented to practice than to theory. Some researchers therefore doubt the impact of teacher-led research on educational quality (Lather, 2004). It seems that the gap that is referred to is mainly caused by a lack of exchange of knowledge, a lack of equal relationships while conducting joint research and a lack of a common language.

In this paper we will elaborate on an ongoing project in which we intend to bridge the aforementioned gap in a sustainable way: a collaborative educational research lab (ERL).

What is an Educational Research Lab?

In an ERL, schools and researchers from higher education institutes work together with many others, such as municipalities, the business community or centres of expertise. They work together intensively towards one goal: to solve a problem which occurs in the educational practice. By combining educational research and practice, the research lab helps to further enhance school development. Furthermore, by producing research output in a variety of modalities (written reports, journal articles, video blogs) the results of each collaboration are made accessible to other schools. This helps to generate insights that can be translated to a new setting, such as another school with its own, unique characteristics.

Outline of the Educational Research Lab project

The ERL project takes place in the Netherlands. The project is funded by the Netherlands Initiative for Education Research⁷ and monitored by the sector organization for primary education (*'PO-Raad'*). It is considered a pilot, aiming to advance collaboration between schools for primary education and higher education

⁷ File number 405-16-626, www.nro.nl



institutes and ultimately contributing to the knowledge base of all stakeholders within the realm of education (NRO 2016).

The project consists of three parts: a) a literature review, resulting in a conceptual model of successful collaborative configurations of partners from different educational fields (i.e. practice and research); b) three educational research labs taking place in three Dutch cities, each of them choosing their own particular focus of attention and their own operating procedures aligned with their research aim; c) a metalevel study, evaluating the factors that underlie successful educational research labs and factors that may hamper success.

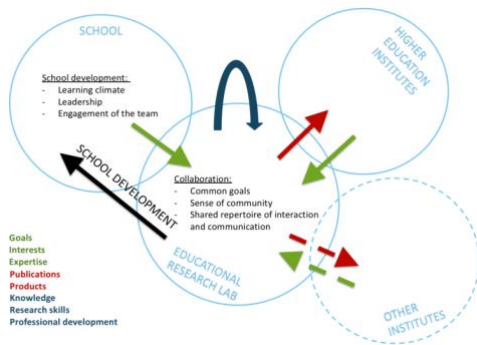
Literature review and conceptual model

At the start of the ERL project, we carried out a literature review⁸ to investigate what is known about the relationship between practice-based research and school development, and about effective means of collaboration between schools and higher education institutes (Zuiker, Schot, Oomen, DeJong, Lockhorst & Klein, 2017). The literature we reviewed described collaborations that seemed to be structured as shown in the working model we developed (see Figure 1): people from different institutes with complementary expertise come together to collaboratively conduct practice-based research with the aim to further school development (cf. Zwart et al., 2015, NRO 2016). In addition, all participants build knowledge and research skills, and develop professionally (the blue arrow). In this paragraph we will focus on two aspects of the literature review: first we will describe the conditions that are necessary for a fruitful collaboration and second we will describe what the literature tells us about what is necessary to translate the results of practice-based research to school development.

⁸ For reasons of space, not all literature that has been reviewed in the literature study is stated in the current proceedings contribution. For a complete list of references, we refer to the complete literature study (Zuiker et al. 2017).



Figure 10: The working model that resulted from the literature review (Zuiker et al. 2017)



Nature of the collaboration

As outlined above, in an ERL, people from different institutes (schools, higher education institutes, and sometimes other parties such as research firms or centers of expertise) come together to collaboratively research an issue in educational practice. The literature identifies several components for a successful collaboration. First, common goals are essential for a successful collaboration (cf. Admiraal et al., 2016). These goals should result in research questions that are within the area of interest and expertise of all the parties to ensure ownership of the project (Baumfield & Butterworth, 2007). Besides the common goals, there can also be conflicting goals which could complicate the collaboration. For instance, researchers strive to collect knowledge which can be generalized, while teachers are mainly interested in improving their teaching practice, which asks for knowledge that is highly contextualized (Kwakman & van den Berg, 2004). In such cases, it is important to communicate about these conflicting goals and to come to an agreement on how these goals will be met (Schenke et al., 2017).

Second, successful collaboration benefits from a sense of community. Because the ERL is made up of people from different domains, people may have different perspectives on the collaboration (as was outlined above for the case of conflicting goals). Within the ERL, all parties therefore have to cross over from their own domain to a new shared domain to form a new community. This is known as boundary crossing (Akkerman & Bakker, 2011). Through boundary crossing, social and cultural discontinuity between different systems can be eliminated. In crossing borders, boundary objects can be helpful: the social artifacts that are meaningful in the different systems and encourage and facilitate interactions between the systems in boundary activities (Akkerman & Bakker, 2011). Forming a new community takes time because the parties need to agree on the nature of the collaboration (cf. Avgitidou 2009). Also, all parties need to feel part of the group and they need to feel



responsible for the collaboration (Admiraal et al., 2016). To achieve this, the parties need to invest in a relationship in which they recognize and appreciate each other's expertise and that is characterized by mutual trust and equality (cf. Bronkhorst et al., 2013; Meijer et al., 2013).

Third, as the project evolves, the parties in the ERL need to build a shared repertoire of interaction and communication. Mutual understanding grows through frequent contact with one another. Frequently discussing responsibilities, expectations and insecurities contributes to collaboration where parties are open to giving and receiving constructive feedback. Explicitly addressing and evaluating communication within the ERL aids a long-lasting collaboration (Admiraal et al., 2016). This is especially important when there are changes within the team, which can lead to changes in the perceived goals of the project.

How can the collaboration lead to school development?

One of the goals of the ERLs research is furthering school development. However, research in an ERL does not automatically lead to school development. Several factors within the ERL and within the participating schools have been identified that contribute to school development.

Factors within the ERL

When teachers and researchers work together, complementary expertise about educational practice and educational research leads to a strong knowledge-base for an 'evidence-informed' educational practice that builds on earlier research. Practice-oriented research has a higher impact when the teachers involved have a lot of input. The research question should originate from educational practice and be aimed at school development (cf. Zwart et al., 2015) in line with the teaching philosophy and policy of the school (Schenke et al., 2017). When research is aimed at improving their own educational practice, it enables teachers to systematically and critically investigate their practice and to develop a research-oriented attitude (cf. Meijer et al., 2013). This contributes to the professional development of teachers in the ERL, which can in turn lead to improvements in their educational practice (Zwart, Van Veen, Meirink, 2012). In addition, when several teachers of a school are involved, this can facilitate professional development throughout the school because the knowledge can be shared and clustered. Shared ownership helps in translating practice-based research to school development (Sleegers & van Dael, 2012).



Factors within the schools

Even when the research in the ERL is relevant to the school and supported by several teachers from the school, school development is not a given. An innovative climate is necessary to expand the school development beyond the teachers participating in the ERLs (Dodgson, 1993). School development requires development at several levels in the organization: the school board, the team, and individual teachers. First, the school board needs to openly support the intended development and facilitate the teacher-researchers (Miner & Mezas, 1990). For instance by giving them recognition and allocate time for them to work on the research and/or by sharing the results of the research in team meetings to discuss the possibilities for implementation in the school at large (Schenke et al., 2017; Zwart et al., 2015). In addition, the other teachers should also be open to professional development and to applying the knowledge that the teacher-researchers gain in the ERLs. That is to say, the learning community needs to extend beyond the ERL into the rest of the school to reach school development.

Contributing to the knowledge base

As argued above, ERLs have a strong potential to contribute to professional development of the teacher-researchers in the ERL and to the school development of the schools involved. A secondary aim of the ERLs is to contribute to the educational knowledge base. Such contribution is achieved by making the contextual knowledge gained in the ERL useful for other contexts, for instance for schools interested in a similar educational innovation. ERLs should strive to not only describe the effects of their intervention but also the context in which these effects were achieved and the accompanying implementation plan. This way, others can adapt the implementation plan to their own unique context (Mol, 1999). When multiple schools have done research focusing on a central theme, and the contexts are adequately described, the crucial contextual factors contributing become clearer, leading to stronger contributions to the scientific knowledge base (Zuiker et al. 2017).

Educational Research Lab Tilburg⁹

The ERL Tilburg focuses on research concerning education for gifted pupils in primary schools. In the Netherlands, schools are transitioning towards inclusive education, which also concerns gifted pupils. The topic is therefore highly relevant

⁹ In this section, the project leaders of each ERL describe their focus, methods and intermediate results. 'We' therefore refers to all participants in the ERL that is described.



for all participants in this ERL. Teachers wonder in what way they can meet the educational needs of gifted pupils, while teacher educators are interested in educating future teachers for working with gifted pupils. In addition, it is known that gifted pupils are not optimally motivated, and Dutch gifted pupils achieve significantly below their potential (PISA, 2012).

In addition to the thematic focus of the Tilburg research lab, we were also interested in studying the aspects of collaboration that help labs be successful. We wanted to gain insight into the expectations of the participants of our ERL and we were interested in the school culture of the participating school teams.

Organisation of the ERL Tilburg

In our educational lab three types of organizations are represented and collaborate: 11 primary schools (1 teacher per school) and the local consortium of primary and special schools entrusted with inclusive education (two teachers and three internal educational advisors), two universities and one university of applied sciences (one researcher of each university and four students) and the institute for teacher education (one teacher educator and one researcher)¹⁰

Phase 1 of the ERL Tilburg: Insight in expectations and school culture

In the first phase of the research collaboration between teachers, researchers and teacher educators, we addressed two research questions:

- (1) What are the expectations of the collaboration between researchers, teacher educators and teachers in this research cooperation?
- (2) What characteristics of school culture do teachers describe when starting the ERL?

Method

This first study, upon which we report in this proceedings manuscript, was an exploratory study. 34 participants of the ERL participated in the expectancy-measure. The sample for this particular study consisted of 11 teachers, 14 school administrators, four researchers and five teacher educators. An open qualitative question card was used (in the form of a postcard), that stated the following question: When would you call this research collaboration a success? The 34 question cards

¹⁰ For more information, see www.point013.nl. Note that this website is in Dutch only



were collected, the responses were entered into an excel sheet and two researchers analyzed the data, using a grounded theory approach (Glaser & Strauss, 2009). As a second measure, we administered a standardized questionnaire with 40 items concerning 'school culture'. Respondents used a 4-point-scale from (1) totally disagree to (4) totally agree; the fifth option was 'I don't know'. A sample of 135 teachers completed this questionnaire. These teachers all worked in the 11 schools participating in the ERL. SPSS was used for data analysis. We calculated the descriptives in order to obtain a first impression of the data.

Results

Results regarding the expectations concerning success of the research cooperation of the 34 participants showed a different focus, dependent on the group of respondents. The teachers mentioned *applicable results* concerning working with gifted pupils. They hoped to learn more on the theme 'giftedness' and were looking for practical, usable advice and tools for these pupils in their classrooms. On the other hand, the school leaders/administrators were especially interested in *collaboration between school teams and researchers*, aiming to reduce the perceived research practice gap. Additionally, they hoped to find *evidence-informed practices*, which could help improve the daily school practice for gifted pupils. Two school leaders emphasized the need of knowledge on giftedness. Finally, the researchers and teacher educators also stated that the *connection between the primary school practice and the scientific environment* was most important for them. They hoped to be able to work together on an evidence-based education program for gifted pupils.

Findings regarding the research-oriented culture in school, showed an open and safe working climate in the schools of the 135 teachers. 95% of the teachers reported feeling safe to share work-related problems with their colleagues and in line with this finding, almost all teachers stated that they share problems with their colleagues (97%). All teachers stated that they were open to feedback from others and 93% stated that they actually gave their colleague-teachers feedback on what went well and on what could be improved (72%). 76% of the teachers reported that their colleagues supported them in doing research with regard to their teaching practices, and 64% stated that they actually conducted research together. 40% of the teachers reported that they invited colleagues to observe their lessons in order to provide them with feedback. Finally, the survey showed variety with regard to school leaders use of pupils' input (from evaluations or tests) or feedback to improve educational practice: 33% of the teachers stated that their school leaders do use pupils' feedback in order to identify educational problems, whereas 39% of the teachers stated that their school leaders do not and 28% of the teachers stated that they did not know about this.



Educational Research Lab Amsterdam

The Education Research Lab Amsterdam consists of a collaboration between three Amsterdam school boards and three Amsterdam-based higher level educational institutions. The aims of the Amsterdam ERL are threefold: 1) build a structure for sustainable cooperation in research that contributes to school development and quality of research, 2) develop, through joint research, relevant knowledge about an issue that binds education professionals, trainers and researchers in an urban environment, 3) share new insights and outcomes online¹¹.

From the start, the Amsterdam ERL is organized so that there is an equal position between all partners at all levels of cooperation: all partners and their interests are represented in the steering committee, the project management group and, at the heart of the Amsterdam ERL, the research group. At this moment one pilot research group is active in the Amsterdam ERL. The thematic focus of this group is diversity. Hence, the specific aim of the pilot project is to, through joint research, develop relevant knowledge regarding diversity issues in education.

Research question and method

Based on the analysis of the process within the Amsterdam ERL in year one, for this contribution we share insights on successes and pitfalls in the creation of shared ownership, meaningfulness and dialogue around practice-based research. Therefore we address the following question: What are the conditions for shaping collaboration in an ERL as a space in which shared ownership, meaningfulness and dialogue exists?

For this study different qualitative data were used, all collected in the period between September 2016 and July 2017. First, based on an activity theory framework (Engeström, 2001), data were collected with Professional Learning Community (PLC) coordinators, research coordinators and researchers during four research group meetings through surveys and focus group discussions. Additionally, data were collected during five focus group discussions with coordinators of the school boards and the researchers from the educational institutes. Last, departing from theory on network analysis (Butts, 2008) and value creation (Wenger, Trayner & de Laat, 2011) data were collected through interviews with participants representing different systems within the Amsterdam ERL organization.

¹¹ See: www.Jameducation.nl. Note that this website is in Dutch only



Results

Analysis of the data shows that in the end of the first year of the Amsterdam ERL, shared ownership, meaningfulness and dialogue were present, though confined to defined moments and linked to specific activities.

Where it concerns dialogue, data provided through the network analysis highlighted that all participants had contacts with participants from the different systems, hence boundary crossing took place. However, the frequency and level of the dialogue depended on the role of the participants. Participants with a double (or triple) role, the so called *boundary crossers* (for example the research coordinators from the school boards who have a role within the research group, within the project management group and within the school board) experienced more ownership. Where it concerns the meaningfulness of the dialogue, based on the value creation analysis it was found that all participants experience *potential value*. *Immediate value* was experienced mostly by teachers, while *redefining value* was mostly experienced by the research coordinators. The analysis also showed us that most value was attributed to dialogue around the collaboration structure itself, and less to dialogue around (doing) practice-based research or the specific theme of this ERL: diversity.

It was found that for creating meaningful collaboration, dialogue between different perspectives was essential. Boundary activities and objects were created to facilitate dialogue. The most successful boundary activities identified in the first year were the joint readings and the elaboration of the shared vision on diversity and practice-based research. Most successful objects were the digital lectures, literature and the research formats.

Regarding pitfalls, findings of the first year indicate that activities that *cannot* be qualified as boundary activities (in the sense that they do not have meaning and do not stimulate dialogue in the different systems) interfere with the process of creating space for shared ownership, meaningfulness and dialogue. An example of such activities is parallel research that focuses on meta questions regarding the process and output of the Amsterdam ERL.

The data also highlighted that objects and activities should be well organized, proactively planned, and aligned to already existing plans and agenda's (for example at the school level). At the same time, they should be embedded within an existing organizational structure in which roles are well defined and participants facilitated. The analysis shows that organizational aspects (composition of the teams, role definitions, planning, facilitation) play an essential role in shaping conditions for collaboration in the ERL. Moreover, *time* was identified as a central element in the



outcome of this study. Building an ERL takes time: time to organize the structure and collaboration forms, but also time to develop real ownership, meaningfulness and dialogue amongst all partners around both the process of doing research together as well as around the specific theme that is being investigated.

Educational Research Lab Utrecht

The aim of the Educational Research Lab Utrecht is to create a sustainable infrastructure between schools and higher education institutes within the city of Utrecht, which allows schools for primary education to develop a scholarly or 'research-minded' attitude to tackle issues that teachers experience in their daily work.

To achieve this goal, the Utrecht ERL takes a bottom-up approach: research questions were rooted in actual issues or problems, experienced by the participating schools themselves. As a result, 15 'sub labs' work independently, within the overarching Educational Research Lab Utrecht (see below, 'organization'). As can be expected when choosing a bottom-up approach, the themes the 15 labs delve into show great variety. A couple of examples are studies concerning the support of 21st century skills; parental involvement; supporting socio-emotional development; attitudes towards inclusive education; self-regulatory learning; and inquiry-based learning. Departing from their own areas of interest, all labs work towards the above mentioned shared goal of developing a scholarly attitude.

Organization of the Utrecht ERL

The ERL Utrecht¹² consists of 15 schools (approximately 45 teachers), belonging to 3 school boards, and five higher education institutions in Utrecht (2 universities, 1 teacher training institution, 2 universities of applied sciences). Representatives of each of these institutions govern and monitor the research process in both a steering committee and a project management group.

Closely collaborating in roles within each sub ERL

The fact that the 15 sub-labs work independently does not mean they work in isolation from each other. All 15 sub-labs exchange intermediate results. This is

¹² For more information, see <http://www.kijkoponderwijs.nl/professionals/werkplaatsonderwijsonderzoek>. Note that this website is in Dutch only.



achieved by assigning clear roles within the project. Each of the sub-labs is composed of individuals with specific roles, who collaborate closely and equally.

We distinguish between four roles within each sub ERL. First, the key position within the lab is what we labeled the ‘broker’. The broker is a typical ‘boundary crosser’ (Akkerman & Bakker 2011). This is a teacher, working in the school, but equipped with *designated time* to take leadership in conducting the study. The broker typically has a Masters degree, and has some experience within the world of academia. This experience allows the broker to act as the ‘missing link’ between science and practice. The second role is that of a researcher from one of the five research institutions, who supports the broker in designing and conducting the research. They are matched to a particular ERL sub-lab depending on their area of expertise. Thirdly, approximately three teachers within the school are also committed to the study (the number of teachers varies greatly between sub-labs). They support their broker in data-collection, and they are involved as constructive research partners. The final role is that of an advisor from the school board. This advisor acts as a facilitator and has a close connection with the school administrator.

Knowledge exchange between sub-labs

Three times a year, all participants in the 15 sub-labs participate in a joint meeting. During these meetings, the brokers present their intermediate results. Participants engage in elaborate group discussions, in which they exchange experiences, knowledge and challenges. This applies to both teachers and researchers. These meetings are of great value for the ultimate goal of the Utrecht ERL: creating an infrastructure that facilitates a scholarly attitude of schools for primary education.

Intermediate insights of the ERL Utrecht

A process evaluation showed a couple of interesting patterns. First, the brokers are very enthusiastic about the project and about conducting research in their own school. They report that they learn quite a lot, and that they perceive the guidance by ‘their’ researcher as very helpful and accessible. However, they also experience their research work as demanding and labor intensive. They emphasize how important the role of the school administrator is, who needs to be committed both concerning content and the facilitation of designated research time. Furthermore, brokers stress that commitment of the team of teachers is also very important and motivating. Teams in which not only brokers but also teachers are provided with designated research time, flourish especially. Teachers who need to be involved in the research in their own time feel more hesitant about participating. Finally, brokers state that they feel strong ownership of their projects.



One sub-lab in the spotlight: *Developing a scaffolding tool for inquiry learning*

We will briefly describe the progress of just one of the sub-labs, to give the reader some idea of how an ERL sub-lab might work. One of the schools experienced that teachers encountered difficulties when guiding their students through inquiry-based learning assignments. Teachers struggled asking questions that would help the students ask good research questions themselves, without the lesson becoming strongly teacher-directed. Therefore, the ERL initiated design-based research, working towards a scaffolding tool that would enable teachers to support children during inquiry-based learning.

The broker designed an elaborate tool, stating many sample questions. The researcher advised and co-designed by consulting literature on inquiry-based learning. The tool was implemented by teachers during a 6-week project. Each week, the teachers provided the broker with a detailed journal, in which they described their experiences with the tool. The broker re-designed the tool based on these data. Intermediate results show that for this school, doing research is highly helpful in advancing school development. The revised tool will now be implemented in a new school-wide project. Whether the adapted version of the tool meets the needs of all teachers needs to be ascertained in the upcoming round of data analysis.

METALEVEL STUDY

On a metalevel, we evaluate the three ERLs in the light of research that has identified factors underlying successful collaborations and factors that may hamper success. Based on the initial model derived from the literature study (see the previous section and Zuiker et al., 2017) and the evaluation of the labs we present the first insights (after one year) (De Jong et al., 2017). We will compare what was stated in the initial model with what has been found in the metalevel study so far.

The following questions will be answered in this metalevel study:

- 1) Which factors enhance or hamper the cooperation between schools and higher education institutes aimed at a better connection between educational research and school development?
- 2) How do schools and higher education institutes collaborate in the three Educational Research Labs and how do schools benefit in terms of school development?



Method

In order to answer the research questions, data are gathered in the following manner: (1) Interviews with coordinators of the ERL, school board, school leaders, teachers and researchers involved in the ERL. The questions asked during the interviews were based on the initial model derived from the literature study, conversations with persons involved, and information from documents and meetings. For an impression see the textbox below. (2) Attending meetings of the ERLs (3) Gathering relevant documents of the ERLs.

Summary of interview questions:	
1.	What are the key elements of a successful collaboration in the collaborative educational research lab?
2.	How do different groups in the collaborative educational research lab relate to one another in terms of roles, responsibilities and equivalence?
3.	How would you describe the cooperation between schools and researchers?
4.	Is the collaborative educational research lab in its current form sufficient as a foundation for a structural collaboration? If not, what should happen to achieve a structural collaboration?
5.	In what ways is knowledge shared within the collaborative educational research lab and with people outside the collaborative educational research lab? Who uses the knowledge that is gathered in the collaborative educational research lab?
6.	What expectations do you have regarding the outcomes of the collaborative educational research lab? Are you satisfied with the expected outcomes?
7.	Will the collaborative educational research lab when the pilot study ends, provide sufficient insight in and answers for practice?

When interpreting the results of this study, it is important to keep in mind that during the foregone first year, the ERLs have mainly focused on the organization, structure and alignment of their content. Setting up each ERL was a lengthy, intensive process. Because of this, the scope of this article will be limited to the first research question. The second question will be answered in the summer of 2018.

Results: factors that underlie successful ERLs

Despite the differences between the three ERLs, some common factors seem to be essential for a successful ERL. First, the ERLs did not start from scratch: they built on existing networks between the participating school boards, schools and institutes for higher education. Most of the key elements for a successful cooperation between education and research that were raised in the aforementioned literature study (see above and Zuiker et al., 2017) were also found in our evaluation study. This included for example the role of the school leader with respect to educational leadership, the role of so called ‘brokers’ and the importance of developing a sense of community between teachers and researchers. In addition, we found three aspects that were not mentioned in the literature study but seem to have played a crucial role in the success of the ERL: the coordinator role, the role of the school board and school leader at different levels, development of participants at higher education institutes



The coordinator role

The role of the coordinator is an essential one for a successful ERL. Our metalevel study shows that, at least in the first year, it is a requirement to have an ERL coordinator. When the ERLs started, the coordinators played an important role in setting up and clarifying the organizational structure and bringing together different groups of people. All the members of the ERLs see the coordinator as the first person to come to with their questions. Especially in the beginning, when there were a lot of questions and the organizational structure was not completely worked out, this role was very useful. But also afterwards, the coordinator remained important in monitoring the process, organizing meetings and addressing issues to the right persons. As a result of these activities, the individual members stay highly committed to a successful ERL. However, it is a risk that the success of an ERL becomes dependent on one person: this makes the entire process vulnerable. One of the ERLs has taken this into account: they have two coordinators.

The role of the school board and school leader at different levels

The funding by the Netherlands Initiative for Education Research provides school boards and schools with money and therefore time to participate in the ERL. Both members of the school board and school leaders feel committed to the ERL and give priority to the research activities. When needed, some school leaders took over teaching in order to give the teacher time to do their research activities. With the given money and time, teachers were able to attend meetings and spend time on doing research. Some of the teachers used to do this in their spare time, but now it is a part of their regular job and time schedule. The school boards play an important role in facilitating the school leaders to engage in the ERL. When other priorities threaten to prevail above participating in the ERL, the school board can facilitate and support school leaders in making the right choices. With respect to the sustainability of ERLs in the future, members of the school board play an important role, for instance in setting relevant strategic goals in which ERLs could be embedded. This year we will further investigate the role of the school boards with respect to the ERLs.

Development of participants at higher education institutes

Another factor that was not mentioned in the literature study is that the researchers from the higher education institutes also develop professionally by participating in an ERL. Participating teachers, researchers, students and coordinators mention this. Outcomes of the ERL for involved persons from a higher education institute are underexposed but will be researched in the second year of the metalevel study.



How to proceed?

In September 2016, the ERLs started and accomplished a lot in the first year. In the summer of 2018 the funding for the ERLs will end and therefore we will pay attention to how the promising developments can become secured for the future. This is one of the aspects on which the meta-evaluation study will focus in the first half of 2018. Other relevant topics are:

- The benefits for the participants in the ERLs at the higher education institutes
- The role of school boards
- The role of school leaders and school boards with respect to further stimulating a research culture within their schools
- The role of having a central research theme within the ERL with respect to school development, the contribution to practice-oriented research and the sustainability of an ERL.
- The most essential characteristics of ERLs

REFERENCES

- Admiraal, W., Kruiter, J., Lockhorst, D., Schenke, W., Sligte, H., Smit, B., & de Wit, W. (2016). Affordances of teacher professional learning in secondary schools. *Studies in Continuing Education*, 38 (3), 281-298.
- Akkerman, S., and A. Bakker. (2011). Boundary Crossing and Boundary Objects. *Review of Educational Research* 81 (2): 132–169.
- Avgitidou, S. (2009). Participation, roles and processes in a collaborative action research project: A reflexive account of the facilitator. *Educational Action Research*, 17, 585-600.
- Baumfield, V., & Butterworth, M. (2007). Creating and translating knowledge about teaching and learning in collaborative school–university research partnerships: An analysis of what is exchanged across the partnerships, by whom and how. *Teachers and Teaching: Theory and practice*, 13, 411-427.
- Bronkhorst, L. H., Meijer, P. C., Koster, B., Akkerman, S. F., & Vermunt, J. D. (2013). Consequential research designs in research on teacher education. *Teaching and Teacher Education*, 33, 90-99.
- Butts, C. T. (2008). Social network analysis: A methodological introduction. *Asian Journal of Social Psychology*, 11(1), 13-41.
- De Jong, A., Exalto, R., De Geus, W., Kieft, M., Klein, T., & Lockhorst, D. (2017). *Werkplaatsen onderwijsonderzoek PO. Tussenrapportage onderzoek jaar 1*. Utrecht: Oberon.



- Dodgson, M. (1993). Organizational learning: A review of some literatures. *Organizational Studies*, 14, 375-394.
- Kwakman, K. & Van den Berg, E. (2004). Professionele ontwikkeling als kennisontwikkeling door leraren: Naar een betere interactie tussen praktijk en theorie. *Tijdschrift voor Lerarenopleiders*, 25(3), 6-12.
- Lather, P. (2004). Scientific research use in education: a critical perspective. *British Educational Research Journal*, 30, 759-772.
- Meijer, P. C., Oolbekkink, H. W., Meirink, J. A., & Lockhorst, D. (2013). Teacher research in secondary education: Effects on teachers' professional and school development, and issues of quality. *International Journal of Educational Research*, 57, 39-50.
- Miner, A. S., & Mezias, S. J. (1990) Ugly duckling no more: Past and futures of organizational learning research. *Organization Science*, 7, 88-99.
- Mol, A. (1999). 'Mooie woorden en verplaatsbare praktijken'. [transferrable practices] In K. Vos & V. Timmerhuis (red.), *Gedragswetenschappen in context: Essays over beleidsrelevantie en wetenschappelijke uitdagingen* (p. 21-34). Den Haag: SDU.
- NRO (2016). Call for Proposals. Pilot Werkplaatsen Onderwijsonderzoek Primair Onderwijs.
- Schenke, W., Geijssel, F., Volman, M. L. L., & Van Driel, J. (2017). Boundary Crossing in R&D Projects in Schools: Learning Through Cross-Professional Collaboration. *Teachers College Record*, 119 (4), 1-42.
- Sleegers, P. & Van Dael, H. (2012). Over effectieve schoolverbetering en de weerbarstigheid van de praktijk. In: A.B. Dijkstra & F.J.G. Janssens (Eds.), *Om de kwaliteit van het onderwijs: Kwaliteitsbepaling en kwaliteitsbevordering* (pp.112-139). Den Haag, Nederland: Boom Lemma uitgevers.
- Van der Linden, W., Bakx, A., Ros, A., Beijaard, D., & Keuvelaar (2015). The development of student teachers' research knowledge, beliefs and attitude. *Journal of Education for Teaching*, 41(1), 4-18.
- Vanderlinde, R., & van Braak, J. (2010). The gap between educational research and practice: Views of teachers, school leaders, intermediaries and researchers. *British Educational Research Journal*, 36(2), 299-316.
- Wenger, E., Trayner, B., & de Laat, M. (2011). *Promoting and assessing value creation in communities and networks: A conceptual framework*. Heerlen: Ruud de Moor Centrum.



- Zeichner, K.M., & Noffke, S.E. (2001). Practitioner research. In V. Richardson (Ed.), *Handbook of Research on Teaching*, (pp. 298-330). Washington, C: American Educational Research Association.
- Zuiker, I., Schot, W.D., Oomen, C., De Jong, A., Lockhorst, D., Klein, T. *Succesvolle werkplaatsen: Wat is er nodig voor een vruchtbare onderzoekssamenwerking tussen onderwijspraktijk, hogescholen en universiteiten?* Universiteit Utrecht / Oberon Onderzoek en advies. <https://dspace.library.uu.nl/handle/1874/359183>
- Zwart, R. C., Smit, B., & Admiraal, W. F. (2015). Docentonderzoek nader bekeken: Een reviewstudie naar de aard en betekenis van onderzoek door leraren. *Pedagogische Studiën*, 92, 131-148.
- Zwart, R., Van Veen, K., & Meirink, J. (Eds.). (2012). *Onderzoek in de school ter discussie: Doelen, criteria en dilemma's*. Leiden, Nederland: Universiteit Leiden.