Developing of knowledge in practice-based research: Research circles as an example

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Abstract

The article deals with the research circle method as a way of conducting practice-based research. Based on data from a research project about drop-out in vocational education and training we analyse the process of generating knowledge and the researcher's role in this process. The empirical data include written material from the circle work and interviews with the practitioners in the research circles concerning the knowledge developing process.

  Three kinds of knowledge have been generated: Knowledge based on the practitioner's experiences, knowledge based on an interplay between existing practical knowledge and research-based knowledge, and new research-based knowledge. In the article we characterise the three types of knowledge and account for the challenges related to the knowledge generating process. Furthermore, we describe the researchers' roles related to developing the three kinds of knowledge. Based on data from the project, we argue that bridging the gap between practice-based and research-based knowledge requires the ability to transform theoretical knowledge to apply the knowledge in real-world practices.

Keywords: action research, practice-based research, research circle, practice-based knowledge, vocational education and training

Introduction

This article deals with developing knowledge in practice-based research. By practice-based research we understand research based on data founded in actual situations and contexts giving insight in these contexts. Opposite to e.g. practice-related research we see practice-based research closely related to the specific context. In the article, we present action research as a kind of practice-based research.

Basically, the purpose of action research is solving a relevant practical problem through a combination of action and research. Both actions and research are conducted in collaboration between researchers and practitioners. In the article, we account for various challenges using action research. One challenge is how to combine practical knowledge with theoretical or research-based knowledge. Another challenge is the researcher's role in the interplay with the practitioners.

To elaborate insight in these two challenges we present data from a completed research and development project concerning dropout in Danish vocational education and training (VET) in which we employed the research circle method. The research circle method can be seen as a Nordic model for action research. In the project, researchers and teachers cooperated on activities that – underpinning the students' decision-making processes – aimed at enhancing the students' completion of the education.

Three kinds of knowledge building process are immanent in the action educational process. The first knowledge process concerns building practice-based knowledge through gathering and systematising the practitioner's experiences. The second knowledge building process deals with developing a meaningful connection between the practitioners' existing practice-based knowledge and research-based knowledge. The third process concerns generating new research-based knowledge about the ongoing activities. In the article we elaborate the three kinds of knowledge-building processes and the challenges related to the process, with the aim of explicating the researchers' responsibilities related to organising research circles in a way that ensures the development of new knowledge. Based on data from the project, we argue that bridging the gap between practice-based and research-based knowledge requires the ability to transform theoretical knowledge for application in real-world practices.

State of the art

The state of the art related to this study encompasses results from research into practice-based research, action research as practice-based research, and research-circles as practice-based research, the latter including an example of research-circles.

Practice-based research

In an educational setting, the meaning of the concept of 'practice-based' research has been discussed and analysed from different perspectives. The relation between practice and research is often described as constituting a gap: between theory and practice, between research-based knowledge and practice-based knowledge, or between researchers and practitioners (Broekkamp & Hout-Wolters, 2007). Some researchers regard this gap as a serious problem that must be bridged to provide practitioners with access to research-based knowledge (Ulvik et al., 2018), which requires the translation of research-based knowledge to practice contexts (Wahlgren & Aarkrog, 2020). Some regard the gap as a purely epistemological problem (Papastephanou, 2014), while others view it as a gap between different professional cultures (Korthagen, 2007) and different institutional contexts (Scanlon, 2018). Kemmis writes that the problem is 'not so much in closing the "gap" between theory and practice, but in closing the gap between roles of theorists and practitioners' (Kemmis, 2009, p. 468). Following Kemmis, in this article, we focus on the researchers' roles with a focus on generating the three kinds of knowledge.

Action research as practice-based research

The main principle of educational action research is to contribute to solving problems and changing practice for the better. In many cases, such improvement takes place through teachers' active participation in the research process; however, the nature of this participation varies. Some educational action research projects are conducted as 'learning studies' aimed at improving the practice of teaching (Johansson, 2017) and gaining new insight into learning processes by making the teachers co-researchers (Thorsten, 2017). Some are designed as 'clinical' (practical) research to develop new professional knowledge (Bulterman-Bos, 2017). Some constitute 'a way of linking educational academic research and teaching practice, aiming at increasing professionalism in teaching, by extending the knowledge base on teaching and learning' (Admiraal et al., 2017, p. 316). Finally, some are conducted as 'inter-professional' collaboration between researchers and teachers to train the teachers' pedagogical approach to a new curriculum initiative (Hiim & Stålhane, 2018). The importance of 'common relevance, shared responsibility for research, and mutual trust and respect for differences in professional identities' are important (Leeman et al., 2018, p. 9). Most action research projects concerned with school development focus on engaging teachers in the research process, whether the emphasis is on making teachers aware of tacit knowledge (Bulterman-Bos, 2017), improving their classroom practices in VET (Saunders, 2012), training mentors (Raaen, 2017), or teacher training in general (Gibbs et al., 2016). A recurrent perspective in these

studies is the different relations and sorts of collaboration between researchers and practitioners.

Some studies focus on the impact on a changed school practice. Karagiorgi et al. (2018) showed how school leaders were able to transform their experiences from an action research project into improved educational practices. With support from researchers and through systematic reflection in diaries, the school leaders were able to improve their own practices and the school's educational outcomes. Similarly, a study of interactions between school leaders and researchers found 'that the thematic and theoretical inputs of the program, practical training, and learning modes stimulated transformations of the principals' thinking and talking about school and leadership practices, what they do in practice, and how they relate to others and the circumstances around them' (Aas et al., 2020, p. 223).

Some studies analyse the conditions for cooperation between researchers and practitioners. Motivation, trust, mutual respect, and resources (particularly time spent) have been mentioned as important conditions for successful cooperation (James & Augustin, 2018). The practitioners' ability to reflect on their own practice was mentioned in another study (Luttenberg et al., 2018), while a study on facilitating evidence-informed teacher practices underlined that the stakeholders' different expectations must be 'negotiated', and that practitioners must be involved in the process of translating research-based knowledge into practice (Flynn, 2018, p. 17). Another study explored how to develop a research relationship between researchers and school leaders, which the authors referred to as a school/university alliance. As part of this alliance, the researchers asked the school practitioners to reflect on and write down their thoughts and feelings about being part of a research project, using their reflections to develop a productive research relationship (Solvason et al., 2018). Practice-based research and the work in the research circles presupposes a social contract that is based on common interests (Raaen, 2017).

As such, the process of collaboration between researchers and practitioners is a vital element of action research. However, this process in not straightforward or problem-free. The studies mentioned above identify various challenges, e.g., different goals, different expectations, different competencies, lack of mutual respect, and, not least, the problem of connecting theory and practice.

Research circles as practice-based research

Research circles can be defined as action research involving intensive collaboration between practitioners and researchers that is embedded in an organisational structure with a clear division of labour between the two groups (Rönnerman & Olin, 2014). Research circles are a way to organise such collaboration in pursuit of a solution to a real-world problem. They can be

characterised as 'collaborative action research' (Rönnerman & Salo, 2012; Wells, 2009) and as 'participatory action learning and action research' (Zuber-Skerritt, 2018). Studies indicate that the research circle have a high impact on practice (Gottlieb & Sørensen, 2018; Mariager-Anderson et al., 2020; Persson, 2008).

Research circles are organised as a series of planned meetings (circle meetings). At these meetings, the practitioners present their practical experiences and practice-based knowledge, while the researchers present theories and research-based knowledge. Between the circle meetings, the practitioners implement and test the knowledge presented at the previous meeting, and the researchers gather data and systematise knowledge. The research circle is based on the participants acting as reflective practitioners (Schön, 1983), and the learning circle method alternating between action, reflection, and experience can be conceptualised by Kolb's learning circle (Kolb, 1984). The work in the research circles takes place over a longer period – normally a year or more.

Research circles differ from similar kinds of collaboration, such as study circles or learning circles, in that researchers participate in the circle work. It can be difficult to distinguish sharply between the different kinds of circle activities, and in some contexts, the terms learning circles and research circles are used interchangeably (Aakjær & Wegener, 2023; Ndlela, 2019). However, the term research circle signifies a collaboration involving two different kinds of competencies: researcher competencies and practitioner competencies.

The literature on research circles seems to agree that researchers should contribute with new knowledge. Persson argues that practitioners should 'read and understand the research relevant to the current field of interest' (Persson, 2008, p. 11, translated from Swedish). However, Holmstrand and Härnsten (2003) conclude that 'a method for transferring scientific knowledge does not seem to exist' (p. 29; translated from Swedish); instead, 'the researcher needs to present arguments for the usefulness of research-based knowledge' (p. 31, translated from Swedish). Other action research projects also found linking theory to specific actions difficult (Ulvik et al., 2018). According to Hermansen and Mausethagen (2016), teachers' application of 'abstract kinds of knowledge' requires 'translation'. The simpler and more concrete the research-based knowledge is, the easier it is to apply to practice through specific actions (Dreer et al., 2017; Lancaster et al., 2012).

As mentioned above, two issues arise in the practice-based research process: The first issue is the knowledge production process, including the relation between practice-based og research-based knowledge. The second issue concerns the researcher's responsibilities related to the cooperation between practitioners and researchers based on their different roles, different goals, and different competencies.

To shed light on these two issues we present findings from a practice-based research project conducted as research circles in a VET-setting answering the following research questions:

- What characterises the three kinds of knowledge building process?
- Which roles do the researchers have in the knowledge building process?

Research circles: An example

In a research circle project conducted 2017–2019, the purpose was to contribute knowledge and experiences that can reduce dropout rates at vocational schools (Mariager-Andersson et al., 2020). Through the activities carried out at the participating vocational schools, knowledge was developed about the decision-making processes that led to young adults dropping out of education. Based on this knowledge, specific training methods were developed to reduce dropout at the schools.

In the project, three research circles were established. Each research circle included about 10 practitioners from five vocational schools, as well as two researchers. The practitioners included managers, guidance counsellors, and teachers. The circle-members met regularly, three times a year for three years. The two researchers participated in each meeting. Between the circle meetings, the practitioners conducted activities aimed at reducing dropout at their schools. The practitioners were obligated to reflect on the results of the activities and gather experiences to be presented in the circle work as a part of the practice-based knowledge.

In the current project the researchers visited the schools between each research circle meeting to keep themselves informed of the activities and to gain insight into the implementation process. As a part of these visits data about the implementation were collected.

Each research circle meeting – with a duration on six hours – followed a fixed agenda, which included the researchers' presentations of research-based knowledge related to dropout and the practitioners' presentations of their experiences conducting the various activities at the schools in the periods between circle meetings. These experiences were discussed and analysed, and information was exchanged among the schools. The research-based knowledge presented at the meetings was likewise discussed with a view to possible real-world applications. Each meeting was concluded by the participants agreeing on a plan for the next activities until next meeting.

Data collection

The main goal for the research and development project was reducing the dropout rate at VET-schools with data collected to study the students' decision-

making processes in relation to staying or dropping out. However, in this article we focus on our study of the research circles. In this study, data was collected to shed light on the researcher's role in relation to the generation of new knowledge and in relation to interactions of researchers and practitioners. The collection of these data included two methods: systematic gathering of experiences at the end of the circle meetings, and interviews with the practitioners (Cohen et al., 2011; Wahlgren et al., 2018).

The first method included summaries from the various research circle meetings, including the practitioners' narratives about the activities conducted at the schools. At two circle meetings – one at midway and one at the end of the project – the practitioners were asked systematically about what and how they had learned from the researchers. The practitioners were asked to reflect individually on their learnings; afterwards they were instructed to discuss their personal experiences with colleagues from their school. The answers were recorded and written down. Thus, data includes written notes taken by the researchers about the practitioner's consideration of the interaction between us and them.

The second method of data collection included interviews with practitioners from each school. A total of twelve interviews were conducted, of which five were individual interview and seven focus group interviews. These interviews included questions about the knowledge that the practitioners had gained from the collaboration process, divided into two themes. The first theme concerned the knowledge and experiences the practitioners had gained through the work in the research circles. The practitioners were asked the following questions: 'Please tell us what you have learned from the work in the research circle?' and 'Which of these learnings do you use in your daily practice?' Having answered these questions, the informants were asked whether they had obtained specific kinds of knowledge, e.g., knowledge about preventing dropout, knowledge about different types of decision-making processes, knowledge about data collection methods, or knowledge about theory. It was all issues presented by the researchers in the project. The second interview theme concerned how this knowledge acquisition took place, asking the practitioners the following questions: 'In which situations do you feel that you have learned something?' and 'How do you perceive the interaction between the practitioners and between the practitioners and the researchers?'

We have analysed the data according to the following principles: First, we collected the statements that provided information about the knowledge that the participants had obtained. Then we categorised the statements in relation to practice-based knowledge and practice-research related knowledge. Third, we chose statements with the same kind of content in all three research circles. The

criteria for the selection of the statements that we bring in this article are that they must be typical, comprehensible, illustrative, and relatively context independent.

As a validity check, we have presented both statements and conclusions to the practitioners as part of the research circle work.

Based on the data, we have identified two distinct processes of knowledge-building as part of the research circle work: systematising practice-based knowledge and linking practice-based and research-based knowledge. However, in the development project a third kind of knowledge building was included, namely generating research-based knowledge, in which the practitioners were only partly involved. We outline these processes in the following, accounting for the researchers' responsibilities in relation to the processes.

Concerning the ethical issues, data collection took place in agreement with the practitioners, who have accepted that we use their contributions and the interview recordings for research. The collected data and the conclusions drawn on that background have been presented to the practitioners and discussed as part of the circle work to comment and accept before publication in the final report.

Results

Below we present the results from the study structured in three themes: systematising practice-based knowledge, linking research-based knowledge and practice-based knowledge, and generating research-based knowledge.

Systematising practice-based knowledge

In the research circles, practice-based knowledge was constructed from the practitioners' experiences. The construction includes two processes: formation of experiences and exchange of experiences.

The *formation of experiences* required participants to reflect on what they had learned from the activities they had conducted at their school since the last circle meeting. The question guiding this reflection process was: What do the experiences mean for my practice?

The *exchange of experiences* in the research circles required participants to present their experiences in a way that the other participants could understand and apply to their own practice. As such, the formation process had to include a transformation, translating participants' personal experiences into a mode that they were able to describe and discuss. This was in itself a learning process. The exchange of experiences involved linking one's own experiences to the experiences of the other participants, supporting learning by providing other perspectives on one's own experiences and exposure to new experiences.

During the circle work, the practitioners highlighted the *exchange of experiences* as the project's most important contribution. Exchanging experiences with

practitioners at other schools inspired participants to change and improve their own practice. The practitioners exchanged their experiences using specific methods, e.g., distinguishing between the students' 'ability' to complete the training course and their 'desire' to continue at the school. Meanwhile, many of the participants were inspired by another distinction: 'You are inspired by the others; we knew nothing about any of the schools other than our own. We have stolen the concept of "can–will" [whether the student can accomplish or will accomplish a task] because we think it clarifies what we do at our school.' Likewise, the participants discussed and brought specific career guidance methods with them back to their schools, or copied specific techniques, such as questioning techniques, from each other.

The systematisation of practice-based knowledge had a significant effect on participants' everyday lives. It provided useful knowledge that could be transformed into new actions. Meeting each other and exchanging experiences was rewarding because it 'keeps your nose to the grindstone', as one of the participants put it.

The work in the research circles was based on the development of concrete activities, as the following statements indicate. One guidance counsellor explained: 'We have changed our practice, meaning that the guidance counsellor now joins the team at an early stage and that the guidance begins before the student has too much absence.' Another told us: 'We have begun to evaluate our efforts much more. It takes time, but we have had positive results.' A third guidance counsellor stated: 'I have begun to reflect on my own guidance practice. Doing so has given me new energy and had a positive effect on my daily life'.

The *formation of experiences* required the participants acting as reflective practitioners (Schön, 1983). It was a prerequisite for the work that the participants were able to reflect on their experiences when implementing new activities in their daily practice. They had to be able to articulate these experiences in a way that could be communicated to others.

The researchers' task in connection with the systematisation of practice-based knowledge was to train the practitioners to reflect systematically throughout the project. This was done by continually asking the practitioners questions such as: What have you learned from what you have done (since the last circle meeting)? As one of the teachers put it: 'It's good to be involved in something where you are forced to think about what you are doing. An important part of that is continuously having to tell others what you have learned'.

Linking research-based knowledge and practice-based knowledge

The basic rationale of a research circle is to create a functional connection between the research-based knowledge that the researchers bring into the collaboration and the practice-based knowledge that the practitioners either already have or

develop during the project. Linking these two kinds of knowledge supports and qualifies the goal of solving a specific problem (Wahlgren & Aarkrog, 2020).

In the project, the researchers presented knowledge that could contribute to a better understanding of the students' considerations and decision-making processes related to dropping out. This knowledge included: reasons for dropping out related to the concept of motivation (Rumberger & Rotermund, 2012), self-determination theory (Deci & Ryan, 2000), and the concept of self-efficacy (Bandura, 1997), as well as strategies that students use in decision-making processes (Lessard et al., 2008). The researchers also presented knowledge gathered during the project, such as a typology of the students (Wahlgren et al., 2018) and students' 'decision curves' (Aarkrog et al., 2018).

The data showed that the practitioners perceived the research-based knowledge as important and useful. According to the practitioners, the theoretical presentations were important, as working with theory and theoretical concepts increased their understanding of practice. One of the teachers explained: 'Every time you [the researchers] have placed the empirical data in a theoretical context, I think: What am I actually doing?', before underlining: 'It is important that the theory is closely related to what we do in the schools.'

In the interviews, when talking about applying this research-based knowledge, the practitioners focused on whether they could recognise the theoretical concepts in practice. For example: 'The four types of students are important; [it is] a new tool in terms of [providing] the support students need. It can be translated [to practice] because the types are identifiable'. Or: 'The paper about the students' strategies has been presented many times at meetings with guidance counsellors and teachers [at our school].' Finally, a practitioner talked about the theory of goal orientation: 'Our experience from the project is – in contrast to where we started – that we have to think in terms of setting small goals and sub-goals for the students, rather than more long-term goals or overall goals.'

The research-based knowledge provided the practitioners with a common language, which they could use in their work at the school. One guidance counsellor explained: 'There is also something about a common language. What are we talking about here? The more times we meet, the better the common language […] we lack a common language to talk about what is at stake'. A teacher stated: 'The fact that we are now talking about decision-making processes and not just about dropout numbers has changed our focus in the work we do'.

As part of the research-based knowledge, the practitioners acquired skills in collecting data. They used this knowledge to guide their students: 'We have used the interview guides that were made for the student interview in the project', one guidance counsellor said, with another adding: 'We have become more aware of how the students express themselves when they explain something. We dig

deeper into their reasoning about staying away from school'. Thus, the practitioners used the experiences gained from interviewing students in the project in their own practice guiding students.

For the practitioners, it was important that the interview guides and data collection methods provided concrete tools, which allowed them to use the theory in practice: 'Every time we have been to a research circle meeting, I have been given a tool. It could be, for example, the scheme that one of the researchers had made about strategies in connection with stopping or staying; it makes sense because it is concrete, and when I am interviewing a student, I can follow this guide and when I encounter something new, I can change the interview guide a little.'

The experiences from the project showed that practitioners made use of concrete knowledge and methods, while abstract theoretical knowledge primarily provided a framework for understanding and talking about what happened in practice. If the abstract knowledge is to be put to more active or practical use, it must be 'translated' into practice. In the project, we were surprised that a large part of the research-based knowledge that we presented during circle meetings was not used – nor was it mentioned in the interviews as something that had made an impression on the practitioners or that they could remember.

The researchers' task in connection with linking research-based to practice-based knowledge is to choose research-based knowledge that is relevant to the specific practice context and to bring this knowledge into play during the work in research circles. Central to this process is the translation of research-based knowledge into concrete and specific methods for use in practice. This translation must enable that the theories can be applied and tested in practice.

The translation takes place at the circle meetings, where researchers and practitioners together discuss the relevance and applicability of the knowledge presented, and when the practitioners apply the 'theory' to their own practice. In the project, practitioners had to discuss and plan how they could apply knowledge about different decision-making processes and decision-making patterns within their practice. In this process they needed guidance from the researchers.

Thus, linking research-based and practice-based knowledge is an interactive process, where the research-based knowledge must be transformed and applied to specific practices.

Experiences from the project showed that the closer the content of theoretical knowledge to the concrete practice, and the more time the researchers spent on guiding the practitioners to exemplify how theoretical knowledge can be translated into concrete and specific actions, the more likely it is that this knowledge will be used.

Generating research-based knowledge

In the project, a quite extensive data collection took place parallel to the developmental activities. Data were collected about students' decision-making patterns (Aarkrog et al., 2018), about the relation between decision-making processes and the current training programmes (Wahlgren et al., 2018), and about 'decision curves' at the individual student and at class levels (Gottlieb & Wahlgren, 2018). Finally, data were collected concerning the links between students' goal orientation, the teachers' career guiding activities, and dropout rates (Aarkrog & Wahlgren, 2022).

In this systematic process of gathering data, the researchers sometimes faced dilemmas arising from differences in the researchers' and practitioners' respective goals and interests. The practitioners wanted to develop and implement activities preventing dropout, whereas the researchers aimed at generating theoretically based knowledge about the various factors influencing dropout processes.

In the project, we have solved this dilemma in two ways. One is that we clarified how the practitioners could use the collected knowledge as part of the research circle work. Thus, the researchers presented the knowledge they had generated to the practitioners. The other way was inviting the practitioners to play an active role in data collection, participating in the interviews to train them to think in a research-based way.

This dilemma – the alternation between qualifying the research and qualifying the practical applicability – challenges the researcher's role. It includes the educational processes of conveying the research results continuously to the practitioners and guiding the practitioners to apply this data and to participate actively in the data collection process.

Discussion

To what extent can the results found be generalised to other sorts of practice-based research? Are the three kinds of knowledge generation relevant and recognisable in other kinds of practice-based research? Are the roles attributed to the researchers in the practice-based research in the study dependent on the particular context or are the roles a necessary part of a practice-based research in general?

In response to the first question, we have dealt with a specific sort of practice-based research, namely the research circle as a kind of action research. As previously described, in this kind of research, collaboration between researchers and practitioners is essential in connection with solving a concrete problem. In our case, the collaboration concerned reducing the dropout rate in VET. However, we argue that the three processes of knowledge generation are an

immanent part of practice-based research, which deals actively with the solution of a relevant problem in collaboration between researchers and practitioners. The three sorts can be weighted differently depending on the current cooperation and problem. However basically, this kind of research includes all three dimensions: generating practice-based knowledge, linking research-based knowledge and practice-based knowledge, and developing research-based knowledge.

Another characteristic of practice-based research is the interaction between researchers and practitioners. To understand the empirical results presented in the article, it should be emphasised that the project was initiated by the researchers. Consequently, they were responsible for initiating and coordinating the work in the research circles (also discussed by Thomsen et al., 2017), causing an asymmetry in the coordination and ownership of the activities in the research circles. Meanwhile, there was also a symmetry based on a common interest in solving the problem at hand.

We argue that caused by the division of labour in the circle work, there will always be an asymmetry between researchers and practitioners. The asymmetry can have different shapes, depending on the specific context and on the skills and experience the practitioner brings to the collaboration. No matter what, the researchers possess research skills that will drive the development and systematisation of knowledge. As shown in our findings, researcher competences have different content and different influence on the three kinds of knowledge building process: least in the systematisation of practical experiences and most in the creation of research-based knowledge. Based on our data, the most difficult process is linking practice-based and research-based knowledge.

Concerning reliability, we found similar data in the three research circles that have been completed (regardless of which researchers led the circles). Concerning validity, we have selected the examples and statements from the data that most clearly illustrate the informants' typical point of view. We have presented the statements in a way that enables other researchers (readers) to assess the meaning og the statements. As mentioned above, we have presented both statements and conclusions to the practitioners as part of the research circle work. The practitioners' comments have confirmed our interpretation of their statements.

Conclusion

In the article, we have focused on the interaction between research-based and practice-based knowledge in research circles. In the research circles at the core of our analysis, we observed changes and improvements of practice. The practitioners learned from their own and others' experiences, and they used the

research-based knowledge presented during circle meetings as a conceptual framework as well as a set of methods for understanding and improving practice.

Based on our findings, we conclude that researchers have three primary tasks in research circles: ensuring a systematic and reflective conceptualisation of experiences; ensuring that the research-based knowledge is translated into practice; and collecting systematic data while ensuring a synthesis of practical experiences and existing theory. For this to succeed, the practitioners must be capable of compiling and (collectively) systematising their experiences and transforming them to actions in practice. However, this requires the researchers' guidance and training of the practitioners. Such a guidance and training strengthen the asymmetric relation between researchers and practitioners and must be considered as a part of the collaboration.

In the project, we found that it was difficult to apply research-based knowledge in practice. We therefore conclude that the use of research-based knowledge requires a particular effort: in research circles and in action research in general, research-based knowledge must be translated into concrete actions that contribute to solving real-world problems: the research-based knowledge must be action indicating. The researchers must ensure that the practitioners are involved in this translation process. The application of research-based knowledge in practice requires the translation of key concepts and, not least, the time to 'translate' and apply existing knowledge.

Against this background, we suggest that the challenge when translating research-based knowledge into activities in practice is to make the process of translation part of the activities in the research circles.

We see the relation between research-based knowledge and action in practice as an everlasting problem which still needed to be further investigated.

Notes on contributors

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