

Action Research: Intertwining three exploratory processes to meet the competing demands of rigour and relevance

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Abstract: For decades, scholars have questioned whether it is possible to conduct research that is both relevant to practitioners and empirically sound. This is the very challenge faced by researchers at Dutch universities of applied sciences. In this paper we build on the findings of an action research project into the research practices of a Research Centre at a Dutch university of applied sciences. We found that action research (AR) works best when conceptualised as three intertwined processes: (1) a joint inquiry with practitioners aimed at improving their actions and reflections on their own practice; (2) a collaborative review with (representative) practitioners and management researchers aimed at conceptualising the issue and process of the joint inquiry; and (3) making a contribution to academic theory through a published paper building on theory related to the specific content and process of the inquiry. This paper will argue that this triple process structure can encompass the Lego AR project—one of the few published in a leading academic journal—as well as new conceptualisations of practice research (Goldkuhl, 2011, 2012) and meta-action research (Fletcher et al., 2010). As such it can be of value for all researchers looking to balance the competing demands of rigour and relevance.

Keywords: practice-based research; practice research; action research; meta-action research; Triple Process Structure, process levels

1 Relevance and rigour: competing demands

The tension between rigour and relevance is intrinsic to practice-based research and the subject of continuing debate. The literature on the rigour-relevance debate describes these criteria as either complementary, competing yet reconcilable, or incompatible.

Andriessen (2014) defines rigour and relevance as two dimensions of practice-based research and provides an impartial overview of the choices researchers have in terms of orientation, quality criteria and methodology. He is less impartial about the concept of ‘applied research’ that assumes a linear model of knowledge generation by conducting basic research followed by applied research. Andriessen rejects this idea of applied research, using Schön’s metaphor (1983) of the “swampy lowlands” of practice where everything is insecure, complex, unstable and full of value conflicts, implying that if research is to be relevant to practice, it should engage with that “messy” reality from the outset.

As a discipline, organisational development, change and learning is concerned with the messy reality of organisations. Most action researchers in this field assert that rigor and relevance are complementary (e.g. Cummings & Worley, 2009; Lüscher & Lewis, 2008; Argyris, Putnam & McLain Smith, 1985). Yet the complementarity thesis covers up some real contradictions between rigour and relevance. One is the demand that the choice of intervention be based on empirical findings indicating that intended outcomes can actually be produced, while knowledge of intervention effects is, even after 40 years, still at a “rudimentary stage of development” (Cummings & Worley, 2009: 152). Four decades of OD work has proven practically relevant without that knowledge, so it seems warranted to ask how crucial it really is to making effective interventions. In practice, interventions may not need to be so rigorous to be effective. Even Lüscher and Lewis (2008), whose AR reports are among the few published in an eminent academic journal, simply say their contract did not include studying the effects on performance. Another contradiction is that rigorously researched interventions are not applied very often. For example, Argyris set rigorous standards and used rigorous methods for designing action science and for making practitioners’ theories-in-use explicit in order to test and modify these, but the interventions of action science are rarely applied. One revealing example of the contradiction between rigour and relevance is the debate between Beer and Argyris about the Strategic

Fitness Process intervention method. Beer and Eisenstat (2000) claim that this method solves strategy implementation problems, because it enables managers to have an honest, cross-hierarchical dialogue about possible obstacles blocking effective strategy implementation. Argyris (2010: 169) questions Beer's use of the word 'problems'. Is Beer referring to the barriers that surface during interventions or to the obstacles that prevent participants from identifying and avoiding the barriers and from being candid about these before? If the intervention addressed the barriers, it solved first-order problems, but if it did not address the original obstacles, it failed to solve the second-order problems of covering up and making the barriers undiscussable, making "the changes ... not likely to persevere." Beer's response (2011) was that the skills of action science are too complicated to learn during an intervention.

By glossing over the real contradictions between rigour and relevance, OD action researchers have not generated much in the way of knowledge that contributes to management theory. Only a few AR reports have ever been published in academic journals, publications whose main requirement is rigour. This low publication rate has led some researchers to question action researchers' assumption that rigour and relevance are reconcilable (Kieser, Nicolai & Seidl, 2015: 165; Kieser & Leiner, 2009: 526).

According to Bullinger, Kieser and Schiller-Merkens (2015), most academic scholars also regard the demands for rigour and relevance as reconcilable. Yet their analysis of papers discussing the rigour-relevance dichotomy in leading management journals shows that most scholars follow the logic of rigorous research while merely paying lip service to the practical needs of management. Kieser and Leiner (2009) argue that it is impossible to authentically consider the relevance criterion in evaluations of scientific output. Truly assessing the relevance of this output would require involving practitioners who are better equipped than researchers to judge relevance, but unqualified to judge rigour. Kieser and Leiner conclude that the rigour-relevance divide is unbridgeable. Practitioners and scholars are part of two different systems that are unable to communicate because of the specialised language each has developed. They assert that a useful exchange between the two systems would only be possible if bilingual and bicompetent researchers acted as facilitators who could transfer schemas from the context of practical improvements to the context of theory production and vice versa. Their task is to recognise and convey the implications of scientific analysis for practical problems, and to describe practical situations such that "researchers can identify one or more relevant science concepts and can provide interpretations that practitioners might find inspiring" (Kieser & Leiner, 2009: 528). This task description assumes practitioners can learn from researchers, not vice versa.

The debate as outlined above warrants the conclusion that rigour and relevance are competing demands. It is our aim to develop an action research model that respects these competing demands while enabling a useful exchange between both systems. We will show that, if we accept Andriessen's claim that practice-based research needs to enter the swampy lowlands, we need a more dynamic and reciprocal exchange than the 'go-between model' that Kieser & Leiner advocate.

2 Action research: single, dual or triple process?

This paper explains and refines our triple process action research model (Schuiling and Kiewiet, 2016) and will introduce two practical tools for designing and reviewing AR projects using this model. We will first explain its provenance, detailing what it retains and rejects from earlier action research models.

The very first concept of action research postulated the idea of a triangle: action, research and training were considered "a triangle that should be kept together for the sake of any of its corners" (Lewin, 1946: 149). Schuiling and Vermaak (2016) described how Lewin's focus shifts from his ostensible goal of evaluating the effectiveness of various organisational change techniques to "the tremendous pedagogical effect" of the research activity on the training process by creating "a mood of relaxed objectivity" in a field "loaded with emotionality and attitude rigidity". Lewin's triangle expresses the idea that injecting research into practitioners' training transforms the training process and, potentially, the 'action' itself—the practitioners' professional practice—and that this interaction in turn transforms the practice of research, as researchers make new discoveries by working with practitioners in a learning context. Schuiling and Vermaak concluded that the action-research dichotomy had from the outset actually been identified as a trichotomy.

In later theories, however, the triangle was abandoned in favour of phased models. Action research was conceptualised as a single process with three, four or five stages that needed to be completed in order to solve

problems and achieve change. Lewin (1946) was modelled as a three-stage process of diagnosis, intervention and evaluation. In OD, French (1969, quoted by French & Bell, 1999) used this scheme to design a consultancy process with a continuous iteration of executives perceiving problems and consulting a behavioural scientist, the consultant gathering data and making a diagnosis, giving feedback to the client, initiating joint action planning, action taking, gathering more data, et cetera. Susman and Evered (1978) even developed a five-phase scheme, consisting of diagnosis, action planning, action taking, evaluation and specification of learning. And there are many more single-process models, for example Checkland (1991) and Heron and Reason (2001).

To emphasize the dual goals of improving practice and developing theory, dual-process models were devised. Argyris, Putnam and McLain Smith (1985) introduced the concept of action science to address two problems: (1) action research had gradually been separated from theory building and testing, and (2) the methodology of rigorous research had become so disconnected from the reality it was designed to understand that it was no longer useful. In 2001, McKay and Marshall introduced an action research model that consisted of two interlinked cycles with different aims. The first cycle aims to bring about improvements in the real world while the other aims to generate new knowledge and insights in response to a research question. In 2002, Zuber-Skerritt and Perry divided action research into two separate projects—a core action research project and a thesis action research project—in an effort to help postgraduates in the social and human sciences understand the difference between collaborative, participatory action research aimed at practical improvement and independent action research aimed at writing a thesis and contributing to theoretical knowledge. In 2014, Coghlan and Brannick conceptualised action research as two parallel action research cycles. One consists of four steps (constructing, planning action, taking action and evaluating action), with a preliminary step for defining the context and purpose of the AR project. The other is a reflective cycle or “an action research cycle about the action research cycle” (Coghlan and Brannick, 2014: 13): it continuously questions how the four main steps are executed and whether they are consistent. It is a meta-learning cycle that reflects on the content, process and premises of the actions taken in the other cycle. In a way, Coghlan and Brannick take the ‘specifying learning’ stage from Susman and Evered’s five-stage model and give it pride of place as a cycle in its own right to emphasize the fact that meta-learning and reflection is continuous and runs parallel to the four main steps.

Cronholm and Goldkuhl (2004) were the first to postulate a triple process model, which they labelled “three different practices”. They define a practice as a meaningful, holistic entity encompassing human actions, humans and their shared practical understanding, a common language and material objects used in the practice. They conceptualise action research as three interlinked practices: regular business practice, theoretical research practice, and the intersecting practice of business change / empirical research. This concept is based on the idea that action research involves collaboration between researchers and practitioners of a local practice. This interaction between the two practices results in a third intersecting practice. However, Cronholm and Goldkuhl failed to load this third practice conceptually, making it no more than a cut-and-paste operation. They take research into theoretical and empirical work on the one hand, and a business practice and a business change practice on the other. They then paste the two together, neatly presenting collaboration between researchers and practitioners, but nothing more. Their triple practice concept lacks the dialectic that comes from combining empirical work with a business change practice. It was precisely this dialectic that Lewin identified in 1946 and that OD developed into a feedback loop, where feedback impacts the change process and the change process in turn impacts the type of data generated and theories built (Schuiling, 2001). So we need to incorporate this dialectic into the concept of action research. We need to think of this transformative process not only as a process that produces change—the core notion of action research—but also as a process that only happens when research and practice are linked in such a way that it transforms both constituent parts. This is the challenge set by action science: how to connect rigorous research with reality by connecting actions taken to change reality with theory building and testing.

With this legacy in mind, we came up with our own triple process structure (Schuiling and Kiewiet, 2016). This structure owes much to Coghlan and Brannick’s two cycles, but we included a third cycle in it because we felt their second process did not achieve the goal of developing actionable knowledge. Our model also builds on Cronholm and Goldkuhl’s three practices, but adds the dynamic dialectic missing from their structure. Our triple-process model, or Triple Process Structure (TPS), distinguishes between the process of joint inquiry in practice, the collaborative review of this inquiry, and scientific research. The outputs of these processes are defined as improved thinking and acting, an improved method of joint inquiry in practice, and a theoretical contribution respectively. Each process requires different sets of actors to collaborate. It is the action

researcher's job to weave all three processes together, as it is their intertwinement that enables each process to produce its output.

Since then, we have concluded that our concepts of a 'theoretical contribution' and 'meta-action research' are rather abstract and vague and leave room for improvement. This paper aims to refine and improve our triple process structure in three ways. Basing ourselves on Goldkuhl (2012), we will first deal with the requirement that action research produce not only local but also general practice contributions to be theoretically valid. Next, we will look at the notions of Fletcher et al (2010) on meta-action research to clarify our own concept of meta-action research. Lastly, we will introduce two tools for designing and reviewing action research projects using the TPS model. We maintain our thesis that three processes are necessary to achieve the threefold goal of action research: making action more effective, refining the process of inquiry and contributing theoretical knowledge on action.

3 Higher professional education: the practical context of our conceptualisation

Since 2001, institutes of higher professional education in the Netherlands have been remodelled into universities of applied sciences (UASs) with a view to expanding knowledge production and circulation and preparing students for a working practice in which they subject existing routines to a critical analysis, absorb relevant knowledge from elsewhere and improve their professional practice (Leijnse, 2005). To this end, Dutch UASs conduct practice-based research. Andriessen (2014) defines practice-based research as research based on an issue stemming from professional practice and aimed at generating knowledge directly beneficial to this professional practice. Practice-based research is conducted in network projects in collaboration with businesses. Its funding depends on a clearly defined research question arrived at in collaboration with practitioners. In other words, practical relevance is a key criterion for carrying out practice-based research at Dutch UASs.

At the same time, practice-based researchers are also expected to conduct their research in an empirically sound manner. The required rigour and relevance is fostered by the official code of standards for evaluating practice-based research in the Netherlands established by the Netherlands Association of Universities of Applied Sciences (Vereniging Hogescholen, 2015). The Research Centre for Strategic Entrepreneurship (RCSE) has specified these standards for its own research. The RCSE is based at the Windesheim UAS in Zwolle, the Netherlands and has a staff of 7 professors and 55 researchers.

Most RCSE researchers are trained academics. Therefore, their own research methods are not practice-based and they are struggling to give their research the necessary practical relevance. This is a problem because relevance is gaining importance as a criterion in the evaluation of their research. Hence, innovation in research practice and the development of methodologies combining rigour with relevance are key elements in the drive to remodel Dutch institutes of higher professional education into UASs. To this end, a group of RCSE researchers set up a research programme to assess whether adding action research (AR) to researchers' methodological arsenal would help them to generate knowledge that is directly relevant to practice while maintaining the necessary rigour.

We labelled this programme 'meta-action research' as it applied action research to the practice of research. This meta-AR met four requirements we consider key to ensuring both rigour and relevance in AR.

1. The research is a *joint inquiry in practice*: researchers and practitioners collaborate in cycles of action and reflection.
2. This joint inquiry in practice is *driven by the client's problem or felt difficulty* (Dewey, as referred to by Mulder & Bos, 2014; McKernan, 1991) instead of the researcher's agenda. Although action researchers can guide the focus of inquiry into areas that may come closer to their own research interests, professional responsibility dictates that they provide help in the areas specified by the client (Schein, 1987: 33). The idea is that relevant data can be collected in situations created by someone who wants help in changing an existing situation. This is a reversal of the traditional academic practice in which the researcher defines the research setting, the subject matter and the research question and connects with practical realities only to collect data.
3. Action researchers *must combine incompatible roles*: as interventionists they help those who engage them and as researchers they develop knowledge that is interesting beyond the context in which it was developed.

4. *Learning must be reciprocal*: an essential aspect of AR is that the researcher develops solutions in collaboration with the practitioners, and not on their behalf. This requires both to remain open to an evolving reality.

Reasoning that conducting research is a practice too, we designed an AR project that would both conceptualise and improve the practice of conducting research. Six senior researchers at the Centre held bilateral meetings with the first author in a joint inquiry into how AR could help them address their felt difficulty of combining rigour and relevance in their research projects. These senior researchers acted as a core group in four workshops that were open to a larger audience of researchers from the RCSE and other research centres within the university. The workshops were aimed at clarifying three issues: (1) what defines AR; (2) how to address the contrast between practical questions and research questions; and (3), how to intertwine intervention and theory building.

Each workshop started with a core group member discussing how the workshop's topic manifested itself in their own research and posing a question to address in that session. Those present then discussed the question using AR literature. Each workshop ended with answers to the question posed at the start. After three workshops, four researchers integrated AR characteristics into their research plans. These plans were discussed in the fourth workshop with the assistance of two outside experts.

The first author kept a journal of the sparring sessions, designed and moderated the workshops, and drew up a report on each workshop based on audio transcripts. The second author collected data to review the bilateral consultations, the workshop process, the changes made in the research projects and the impact of these changes on rigour and relevance. After each workshop session, we reflected on the session, and discussed how we could build an augmented model of applying AR in practice-based research projects. Our reflection on the second workshop prompted the idea that practice-based research needs a Triple Process Structure and that AR could help create this structure.

4 Triple Process Structure

Figure 1 shows practice-based research as an intertwinement of three processes. Process 1 is a joint inquiry by practitioners and an action researcher.

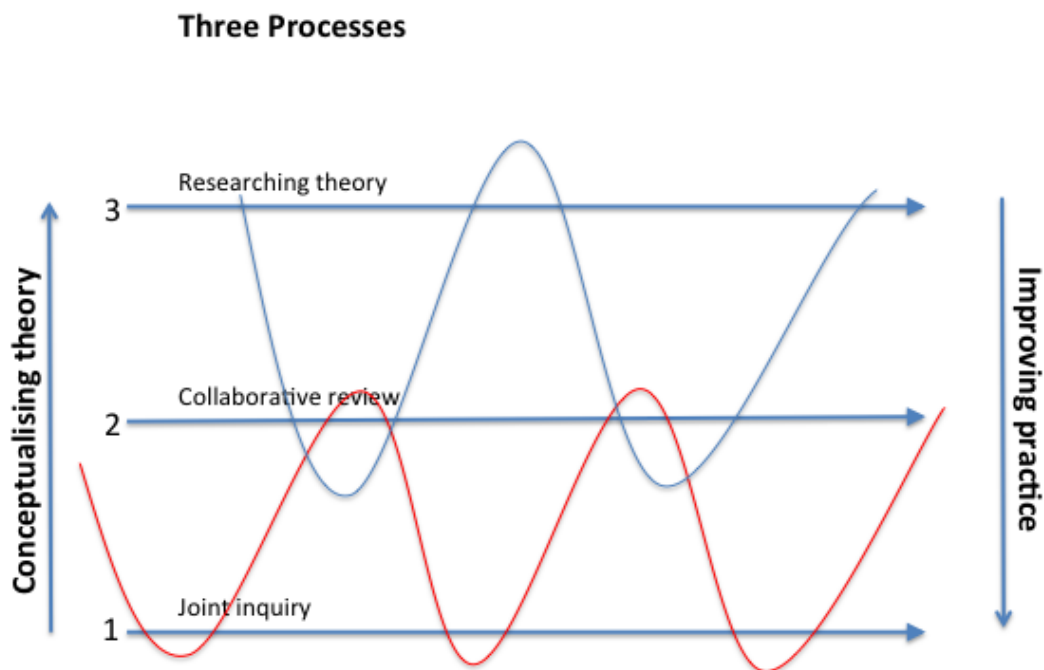


Figure 1: The Triple Process Structure of practice-based research

The action researcher helps the practitioners analyse their felt difficulty by reflecting on the issues they struggle with, by exploring new ways of thinking about these issues, and by enacting new ideas, which results in action-based understanding. Process 2 is a collaborative review of the content and process of Process 1 by the action researcher with all practitioners involved in Process 1 or with a smaller group representing them. Preferably, the group is joined at some point by a management researcher who can add some recent theory to help refresh the theories-in-use in the joint inquiry. Process 2 is intended to generate a method of joint inquiry that the practitioners can use long after the action researcher has left the company. So while Process 1 is about building competence in dealing with the issues people face in their *current* practice, Process 2 is about building competence in dealing with *future* issues. Organisations seeking a sustainable capacity to learn and change (Worley & Lawler, 2010) are likely to invest in Process 2. Process 3, researching theory, is aimed at making a theoretical contribution to a specific discipline, based on literature, new data or a new analysis of existing data. The work is carried out by the action researcher in collaboration with scholars specialised in research methodology and/or in theory on the specific issues dealt with in the joint inquiry. Practitioners will seldom want to participate in this process as they lack the scientific background to assess claims regarding the value of the theoretical contribution.

In this Triple Process Structure, the action researcher is the only person to participate in all three processes. Of course, action researchers are not omniscient. They have mastered the skills of each process well enough to contribute to its output, but others will often be more competent. This requires them to possess good process consultancy skills, not the least of which is the ability to assess their own ignorance (Schein, 1999: 11). Their special expertise is their ability to link or intertwine the three processes. Initially, action researchers support practitioners in their joint inquiry to improve the practitioners' actions and reflections on a particular issue. To intertwine this inquiry with the institutional context, action researchers then institute a review group consisting of joint inquiry participants who are willing to invest time in conceptualising how the joint inquiry process works, how it can be improved, and the results it generates. Action researchers provide the review group with data from Process 1 and theories from Process 3. This results in an institutional contribution: a conceptualised understanding of both the issues at stake and the process of dealing with them. To intertwine the review and research processes, action researchers read relevant literature, connect with relevant researchers, possibly introduce them to the organisation(s), involve them in the collaborative review, and conduct joint research. This results in a contribution to theory. This approach ensures that both practitioners and researchers actively deal with the competing demands of rigour and relevance. Intertwinement is one of the most effective strategies to bridge the separate worlds of theory and practice and to engender productive interaction (Schuiling & Vermaak, 2016).

Much has been written about the role of the action researcher in controlling the research process (Elden & Chisholm, 1993). Here too, the Triple Process Structure can make a valuable contribution. It can help to clarify the control issues at play in each process. In Process 1, it is wise to establish joint control by allowing researcher and practitioner to alternately take the lead, while always ensuring that the practitioners' question remains the guiding principle behind the inquiry. In Process 3, the action researcher should team up with authoritative researchers willing to amend their theories and jointly analyse the data, review the literature and formulate new constructs and propositions. In Process 2, however, control must remain with the action researcher, because this is where Processes 1 and 3 are intertwined and action researchers are the only people qualified to intertwine them. Neither practitioners nor researchers have the required expertise, and few would even attempt it. Only action researchers have the skills, courage and ideals to build, drive and deliver in Process 2.

5 Action research at the Lego Company revisited

The Lego Company AR project is a good example of grounding theory in practice (Lüscher & Lewis, 2008). In their research, Lüscher and Lewis distinguished two processes: sparring and reviewing. Through sparring, action researcher Lüscher helped the Lego managers to make sense of the paradox of managing self-managing teams. In the reviewing process, the researchers and practitioners jointly reflected on the sparring process by interpreting the data collected in that process. They also formulated ideas about the sparring process based on theoretical frameworks found in scholarly literature. According to Lüscher & Lewis's AMJ article, reviewing yielded two theoretical contributions: a model of paradoxical inquiry and a modified theory of paradoxes.

In their account of the Lego case, Lüscher and Lewis (2008) identify the reviewing process as their own research method. They claim that rigour complements relevance (2008: 223). However, this raises two sets of questions. The first pertains to relevance: if a management team is involved in both sparring and reviewing, what is the interaction between these two processes? Does this enhance the managers' learning or limit it? If it limits their learning, some practitioners apparently need to sacrifice their learning for the sake of conceptualisation. If it enhances their learning, why restrict the reviewing only to one management team and not involve all of them? The second problem pertains to rigour: if the action researcher and the practitioners take part in both sparring and reviewing, how do these two processes affect theory production? Practitioners' conceptualisation horizon is the company and their role in it. Does this broaden or narrow the researcher's theoretical scope during the reviewing process? If the process is mutually beneficial, this might build a case for including practitioners in the review process of academic journals. If it is not, why bother having a review group?

Lüscher and Lewis's review process encompasses both a practitioners' review and scholarly research, without distinguishing between the two. This nearly obscures Lüscher's unique innovation of introducing a practice-theory mediating review process into AR practice. We have neither heard of this, nor read about it, anywhere else. These are new and exciting elements: creating a review group, providing it with data and constructs so researcher and managers can together reconceptualise their joint inquiry as a process of paradoxical inquiry, and bringing in a renowned theorist—Lewis—to join the discussion. However, what Lüscher and Lewis failed to acknowledge is the different intent the practitioners and researchers brought to the review. The practitioners did not just want to be sparred with, they also wanted to learn how to spar. It is a desire we personally witnessed in our 'meta-action research' project with the RSCE researchers. The practitioners' drive to understand and conceptualise the joint inquiry process is not inspired by a desire to contribute to academic theory, but to acquire a working method that can benefit their staff and their organisation. For them, the conceptualisation process is anchored in practical interests. So, in the Lego case, the managers wanted to learn how they themselves could act as sparring partners for each other and their employees (Lüscher, 2002/2012).

Our Triple Process Structure does make a distinction between the review and theory production processes. We see modelling and theoretical contributions as two different outputs. Applying this structure to Lüscher and Lewis's AR project and reinterpreting their setup in our triple structure will demonstrate more clearly why their case is an exemplar for the practice of action research.

Figure 2 represents a Triple Process Structure interpretation of Lüscher's AR project at Lego. In our analysis of how Lüscher intertwines the three processes, she plays distinct roles in these processes: (1) as a sparring partner who helps the managers make sense of the paradox of managing self-managing teams; (2) as a reviewer who provides data and theory to one of the management teams (at Lego called the 'focus group') that collaborates with her to conceptualise the issues and the sparring process; (3) as a PhD student who is supervised by a full professor and collaborates with this professor to produce the AMJ paper.

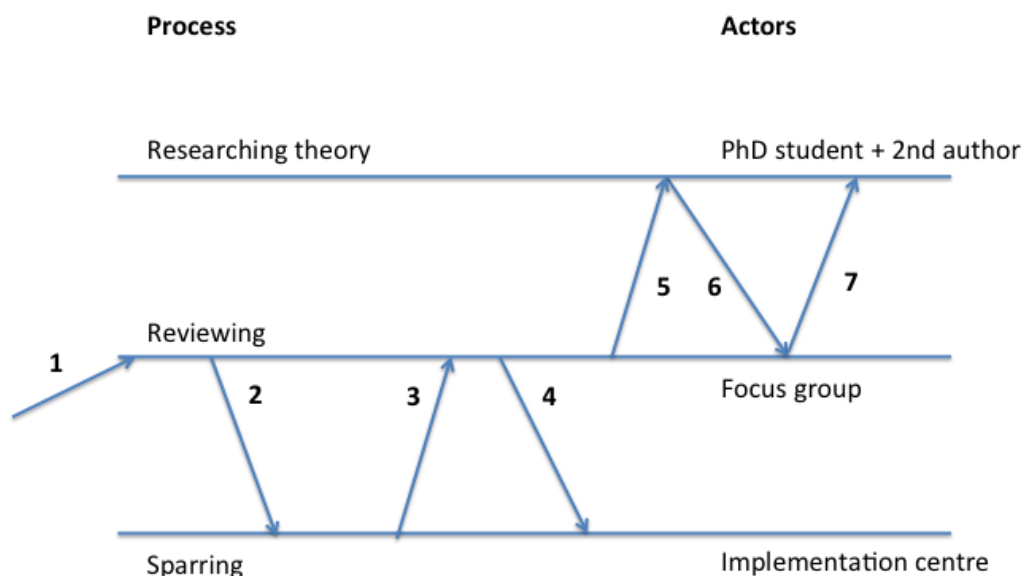


Figure 2: Our analysis of how Lüscher intertwines the three processes in her Lego research (2002/2012)

This representation renders the research process even more “visible and reliable . . . through a disciplined account of managers’ and researchers’ roles in constructing shared understandings” (Lüscher & Lewis, 2008: 238). We feel that by differentiating between the review process (shared conceptualisation) and the researching theory process, we have highlighted that AR can make a theoretical contribution and that this theorising is limited to management scholars and action researchers who base themselves on the data and the concepts jointly produced by action researchers and practitioners.

6 Three types of contribution

Conceptualising the output of the three processes of the TPS model is made easier by first looking at Goldkuhl’s (2011) distinction between the three types of output of practice research. His definition of output follows from his anatomy of practice research as consisting of two sub-practices and three target practices. The two sub-practices are situational inquiry and theorisation, while the three target practices are the local operational practice, the general practice and the research community. This anatomy facilitates the categorisation of three types of output. The first is the Local Practice Contribution (LPC), for example, a diagnosis in a situational inquiry. The second is the General Practice Contribution (GPC), for example, an improved method for making a diagnosis in a situational inquiry. A GPC provides abstract and useful knowledge for practitioners other than those involved in the local work practice. The third output is called “abstract knowledge as suggested contributions to the scientific body of knowledge”. This output is presented to the research community, where fellow researchers are recipients, but also key providers of existing theories and key interactors through dialogue and review (Goldkuhl, 2011).

We find LPC and GPC to be valuable concepts. The GPC results from alternating theorisation with joint inquiry. Based on insights, needs and data from the joint inquiry, new abstract knowledge may be developed and then fed back to the inquiry process as emergent theories and methods (Goldkuhl, 2011: 20). The theorisation practice transforms situational knowledge to abstract knowledge: concepts, theories, models and methods. This knowledge should be formulated as constructive and useful for practice. A GPC’s users are practitioners, educators and students. These groups supply feedback to the researcher as a knowledge constructor, but, more importantly, they continue to test the GPC in new local inquiries where the abstracted knowledge is applied for the sake of situational knowledge creation and improvement of local operational practices, as Goldkuhl (2011) rightly stresses.

We have two critical comments here. Firstly, with his anatomy of practice research, Goldkuhl (2011) actually reverts from his three-practices model (Cronholm & Goldkuhl, 2004) back to a two-practices model of practice research: theorisation and local inquiry. This dual process lacks the learning process of developing competences for the future, for dealing with other issues than the present one: the very competences whose development has always been a key purpose of action research in OD. Secondly, Goldkuhl’s distinction between the output for general practice and the output for the research community is unclear. He defines ‘abstract and useful knowledge’ as the contribution to general practice and ‘abstract knowledge’ as a suggested contribution to the research community. This gives us cause to wonder whether this is the same output presented to two different communities, or two different types of output. And if they are different, how do they differ? Or, is the distinction merely an acknowledgement of the research community doing work of a higher order than building general practice contributions?

We believe the TPS model addresses both these weaknesses. Our model includes the learning process, in the shape of the collaborative review process that mediates between the processes of joint inquiry and researching theory. In terms of the contribution to general practice, we take a more radical stand than Goldkuhl by positioning the GPC as the output of the researching theory process (see Figure 4). In the TPS model, the process of ‘researching theory’ must produce actionable knowledge for professional practice.

If we reposition Goldkuhl’s three types of contribution in the TPS model, we get the following results: The LPC is the output of the joint inquiry in a local work practice. We follow Goldkuhl’s (2012) proposal to use Susman and Evered’s (1978) model to define four LPCs: a diagnosis intervention, a design intervention, an implementation intervention, and an evaluation intervention. The GPC, however, is repositioned as the output of the researching theory process. We agree with Goldkuhl (2012) that producing LPCs is the foundation for producing GPCs. We also agree that action research is required to produce GPCs (Goldkuhl, 2013). Action research has produced GPCs to many a general practice, such as organisation development, organisational

learning, process consultancy, education, health, and information systems. Producing GPCs is in turn the basis for producing improved theories-of-action models. Two general theories-of-action models have been developed in the field of action science (Argyris, Putnam & McLain Smith, 1985). Action science uses the normal definition of a theory as a set of interconnected propositions that have the same referent: the subject of the theory. It also ascribes to theory the normal functions of explanation, prediction and control. However, it extends theory to everyday life and work. A theory of action is a theory of deliberate human behaviour. It involves causal reasoning. In a theory of action, propositions take the following form: 'In situation *s*, to achieve consequence *c*, do action *a*' (Argyris & Schön, 1974). Action theories themselves are also regarded as a cause, as the action not only applies and tests the theory but also shapes the behavioural world the theory is about (Argyris & Schön, 1974: 17). The field of action science made significant progress from 1974 to 1996, but has lacked substantial development ever since. Theorising GPCs can be a great stimulus for a resumption of the seminal work of action science, because in action science, action and practice are defined in relation to each other. A practice is a 'sequence of actions undertaken by a person to serve others, who are considered clients' and '[a] theory of practice consists of a set of interrelated theories of action that specify for the situations of the practice the action that will, under the relevant assumptions, yield intended consequences' (Argyris & Schön, 1974: 6).

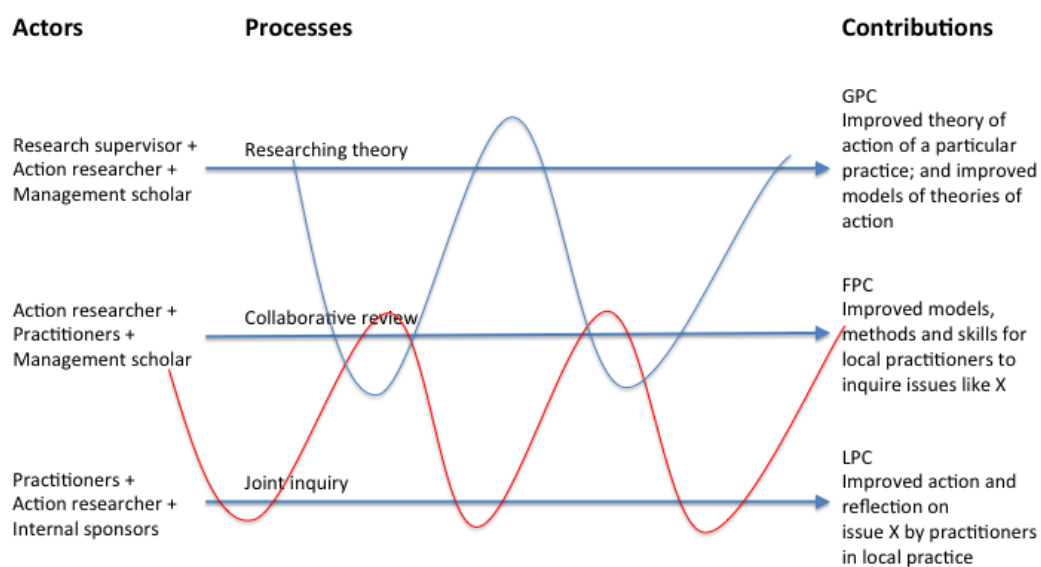


Figure 4: Requisite output and actors for each process in the TPS

The output of the process of collaborative reviewing can be called future practice contribution (FPC). These contributions are developed in and for the local work practice, to prepare it for dealing with future issues. It consists of models, methods and skills. The models help to explore issues similar to X. The methods help to diagnose issues like X, design solutions for them, implement these solutions and evaluate their effectiveness. The skills help local practitioners to use the models and methods.

7 The concept of meta-action research

In Schuiling and Kiewiet (2016), we use the term 'meta-action research' to refer to action research into the practice of research. We found that this idea appealed to the researchers participating in the project. However, 'meta-action research' was also used by Fletcher et al. (2010) to refer to the reflection process following a leadership development seminar in Africa. This publication defined meta-action research as

'action research on or about action research. It is based on reflection, self-reflection, conceptualisation and theorisation of the activities, processes, methods and results of the action research program(s) or project(s), denoting systemic change, transformation, awareness and understanding of one's own learning, and arriving at higher-order concepts, principles, theories or models of action research.' (p. 491)

Rereading the paper, we concluded that several concepts had been used rather loosely:

- A three-day seminar on action research is conflated with action research, even though the participants did not take part in any joint inquiry before or after the seminar. This appears to have been training in action research rather than action research itself.
- What the TPS model calls a ‘collaborative review on the joint inquiry’ amounted to no more than the usual participant satisfaction survey taken at the end of the seminar. There was no collaborative review with the participants about the joint inquiry conducted during the seminar.
- The theory building was described and modelled as three cycles of reflection by the trainers over a 14-week period. This reflection process was labelled ‘meta-action research.’ However, this process consisted of neither action nor research, as the trainers in no way acted upon the practitioners who participated in the seminar or upon researchers specialised in the participants’ fields of activity (e.g. poverty reduction, women’s empowerment, etc.).

Fletcher et al. describe their shock at being criticised by a participant for using a data collection process that “exemplified Western colonisation of Africa”. This makes for fascinating reading, as does the description of the 14-week effort Fletcher et al. made to honestly reflect on what they might have done wrong in the seminar and to work through their defence mechanisms in answering this question. Such reflection makes their article a must-read. But we cannot help but feel that their comprehensive definition of meta-action research is used to gloss over a fundamental problem: the lack of any actual action research. This problem is not theirs alone. We recognise it is increasingly difficult to create communities of inquiry into social practices that have so little impact on the real world problems they are supposed to solve. This highlights the importance of the collaborative review process in the TPS model. And it leads us to caution against using the concept of meta too easily. Therefore, we withdraw our concept of meta-action research as action research into the practice of research. Why would this be more ‘meta’ than action research in the practice of education, nursing, or any other social practice?

We propose instead to reserve the concept of ‘metaprocess’ for the intertwinement of the three processes. This intertwinement is the core of action research and dovetails with the definition of a metaprocess as a process that transforms other processes (Ross, 2014). Without intertwinement, research is just research and will produce rigorous knowledge, but not knowledge relevant for practice. In the absence of any intertwinement, joint inquiry into local practice is just an inquiry to solve a local problem, not the basis for broader knowledge production. It goes without saying that the collaborative review process would not even exist without intertwinement.

8 Using TPS to design and review research

The TPS model can be used to design research projects. Figure 5 shows its four design parameters: (1) minimal specification of the **output** (or contribution) expected to be produced in each process; (2) set of **actors** capable of producing the desired output; (3) sequence of **interactions** that will enable these actors to produce the output; (4) **intertwinement** of interesting data, questions and constructs between the processes to coax actors out of their routines and comfort zone and ask them to contribute to an unfamiliar process.

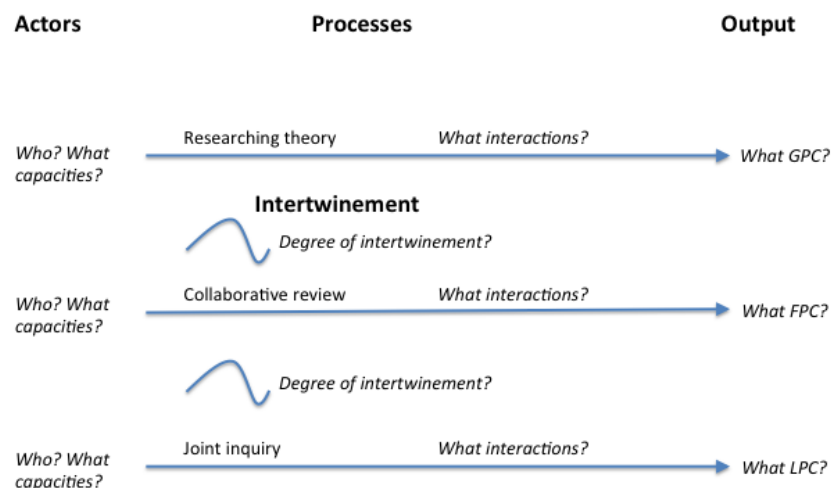


Figure 5: The four design parameters of the TPS model: output, actors, interactions and intertwinement

The four questions in the model—Who? What interactions? Degree of intertwinement? What output?—will continue to evolve during the project and help participants to move back and forth between practice improvement and theory building. It might be helpful to make a basic design decision in advance and settle on one of the four archetypes of action research depicted in Figures 6, 7, 8 and 9.

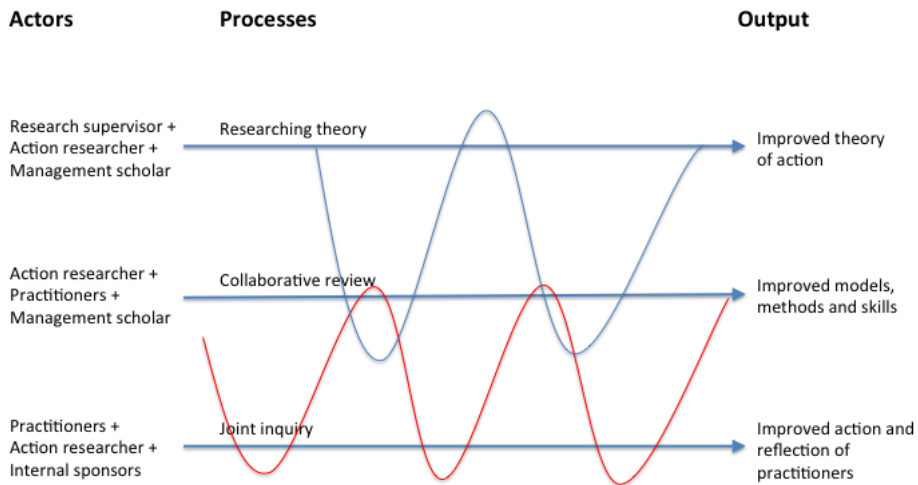


Figure 6: Archetype 1: fully intertwined, practice-based

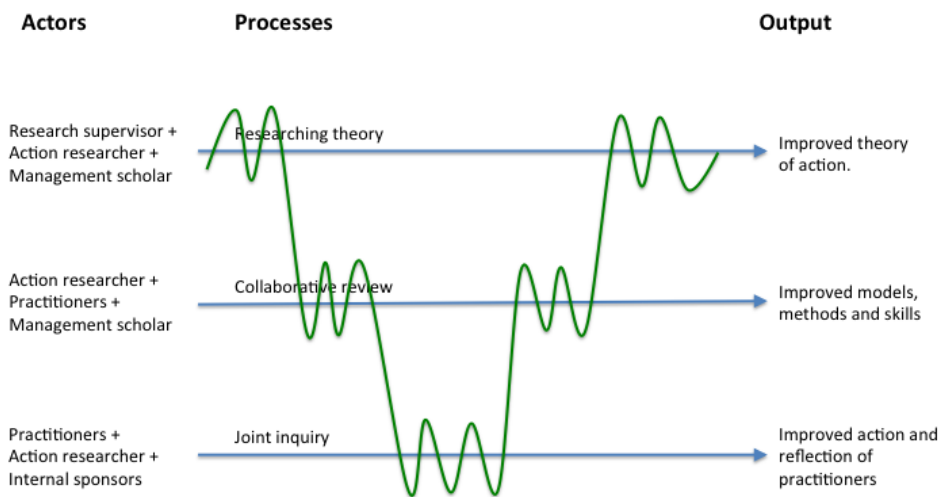


Figure 7: Archetype 2: fully intertwined, research-based

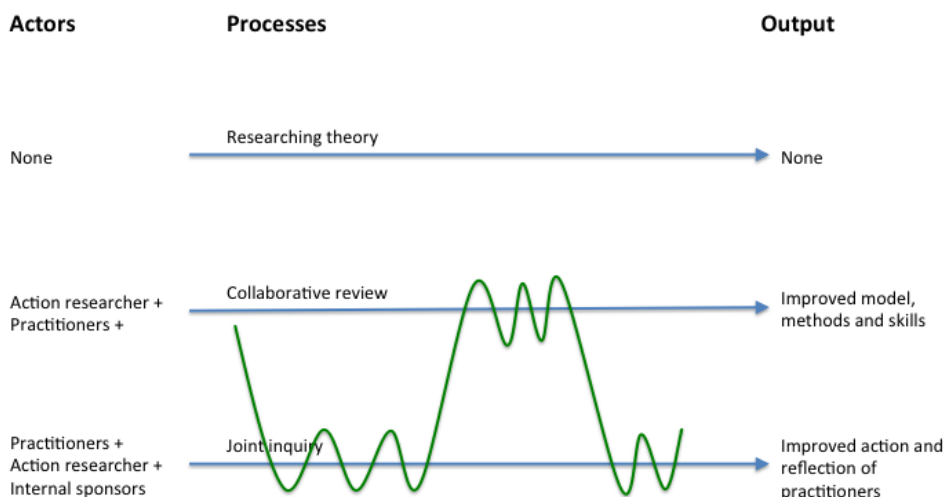


Figure 8: Archetype 3: partially intertwined, practice-based (inquiry and review, no GPC ambitions)

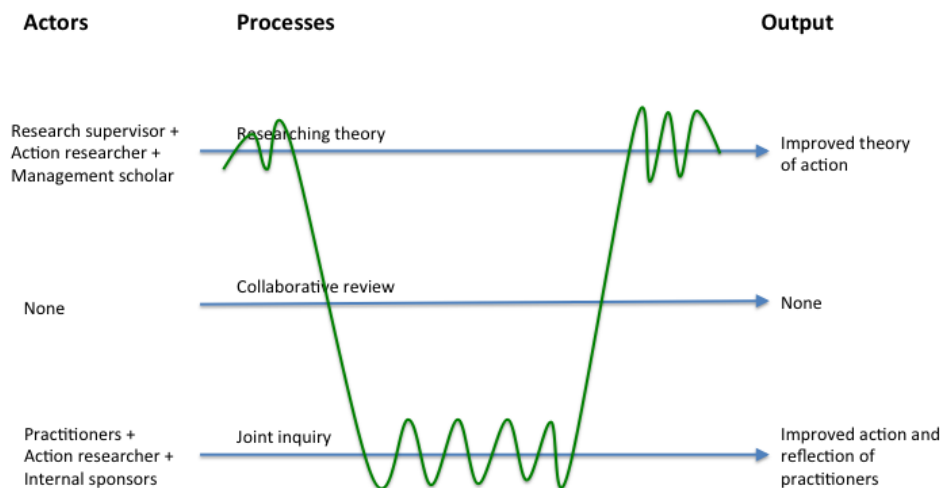


Figure 9: Archetype 4: partially intertwined, research-based (research and inquiry, no FPC ambitions)

9 Discussion

The Triple Process Structure (TPS) addresses an important concern in the rigour-relevance debate. As research and practice are two distinct systems with different standards for their output as well as different interests, competences and mind-sets, collaboration between the two can be detrimental to both (Kieser & Leiner, 2009: 518). This leads to the first TPS principle:

In Process 3, the research agenda takes precedence; in Process 1, the practical agenda takes precedence.

This implies that rigour is the evaluation criterion for Process 3 while relevance is the evaluation criterion for Process 1. Following from this, we arrive at the second TPS principle:

There is no such thing as applied management research.

The concept of applied research falsely assumes that knowledge is developed by conducting basic research followed by practical application of the theories thus developed. Fifty years of fruitless discussions about bridging the rigour-relevance gap may be the most compelling argument against the concept of applied research. So neither Process 3, nor Process 2, nor Process 1 is a form of applied research. There is research and there are applications, but there is no applied research. The third TPS principle, therefore, is:

Practical relevance is derived from a joint inquiry by practitioners and researchers and translates the knowledge of both practitioners and researchers into improved practice.

The fourth TPS principle is:

The middle process of collaborative review is reciprocal, which enhances the quality of both the inquiry process and the research process.

This leads to the fifth principle, which can also be called the 'inverse Heisenberg principle'. Just as researchers affect their objects of study, the objects of study affect the researchers:

In Processes 1 and 2, researchers are affected by those whom they study.

By reframing "being affected" as a process of learning, researchers can begin to see themselves as reflective practitioners who dare to venture into the "swampy lowlands" of practice. This expansion of the researcher's identity is a precondition for collaboration in Process 2.

10 Conclusion

The rigour-relevance debate in management studies has not been settled. Recently a strong case was built for the claim that the gap is unbridgeable and that rigour and relevance represent two competing institutional logics. However, that has not stopped the quest for a fruitful exchange between practitioners and researchers. The Dutch endeavour to develop universities of applied sciences that conduct practice-based research and simultaneously work on building a theory and methodology for practice-based research, is one example of the continuation of this quest. As a contribution to this debate, this paper presents the Triple Process Structure for action research. We believe we found more than we were looking for: the Triple Process Structure is not limited to AR, but defines the basic structure of all research that seeks to strike a balance between the competing demands of rigour and relevance.

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