

RESEARCH QUALITY IN COLLABORATIVE CONTEXT

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ABSTRACT

Participatory innovation need to be researched through collaborative approaches to inquiry in order to fully respect and take advantage of the learning and forms of knowledge of involved actors. The purpose of this conceptual paper is to clarify research quality understood in this broader context. There is generally lack of clarification of this broader context in which approaches to Collaborative Inquiry (CI), like Action and Interactive Research, need to operate in existing methodological literature. Different tactics for developing and understanding research quality is explored. The result and contribution is an overview of broader and varied ways to understand research quality in CI. This broader understanding of research quality can help to legitimate and widen the space for CI, making a contribution in the long run to reforming academic research and university system and making it more interactive in its knowledge production.

INTRODUCTION

Participatory innovation need to be researched through collaborative approaches to inquiry in order to fully respect and take advantage of the learning and forms of knowledge of involved actors. The overall purpose of this paper is to discuss and clarify research quality in a broader collaborative context. Science and research is moving towards closer interaction and collaboration with societal actors and groups in research projects and

processes, e.g. articulated as Mode 2 production of knowledge (Gibbons, 1994). It broadens the framing and organizing of research approaches, designs and methods in order to attain excellence and quality in inquiry as a collaborative endeavor. Collaborative Inquiry thus requires rethinking of perspectives, concepts and methods for understanding and enabling high quality processes and results in a broader context of actors and issues. There are diverse initiatives and concepts of research and its relation to society trying to capture, clarify and support this movement, like co-production, mode 1 and 2, Triple Helix, Responsible Research and Innovation. Action and Interactive Research, as part of the family of participatory research, are approaches to inquiry with a rich experiential, methodological and philosophical tradition of collaborative inquiry will be focused on in this paper (Aagaard Nielsen & Svensson, 2006; Bradbury, 2015; van de Ven, 2007). There are a number of proposals for standards of quality and excellence that are broadening the understanding in recognizing the scientific and practical value in collaborative oriented research, e.g. in mobilizing and pooling a broader spectrum of knowledges and expertise from different communities and ecologies and in producing enhanced valuable outcomes both for academic and practice based actors.

The purpose of this predominantly conceptual paper is to clarify research quality understood in this broader context, including positionality and roles of co-researchers and participants (Herr & Anderson, 2015), on different level of inquiry (methods, design, strategy, institutional, social praxis). There is generally lack of clarification of this broader context in which approaches to CI need to operate in existing methodological literature. From this broader view of context a core issue is understanding quality as dimensions of validity integrated in high quality CI. A widened bandwidth of validity is commendable based on a “participatory worldview” (Bradbury, 2015). The wider spectrum of goals of inquiry occasions different dimensions of validity, where a proposal by Herr & Andersson (2015) is dialogic, outcome, catalytic, democratic, and process validity. Validity dimensions is in the paper also framed through a pragmatic theory of inquiry (Dewey, 1939)

focused on transformation of situations by involved actors. This raises epistemological and value based issues to be taken into account, e.g. concerning an extended epistemology and the way norms and ethics is interpenetrating inquiry. It also raises organizational challenges in organizing research processes with wider inclusion, more horizontally and participatory, as well as institutional challenges of the interweaving of different communities of inquiry and practice emanating from academic, professional and civic areas.

The result and contribution is an overview of broader and varied ways to understand research quality in CI. This broader understanding of research quality can help to legitimate and widen the space for CI, and in the long run to reforming academic research and university system breaking the monopoly of academic knowledge and making it more interactive in its knowledge production. Specifically it points to the fruitfulness and viability for participatory innovation to be married with CI.

QUALITY IN COLLABORATIVE RESEARCH

Collaborative research is here understood as a summary name for different approaches where academics and different actors in society collaborate in research (e.g. action research, interactive research, participatory research, co-production). Collaborative research often tend to be assessed through too restricting or inappropriate understanding of quality. It raises issues like, is it sufficiently scientific? Is it restricting scientific/research quality? What does "impact" qualities have to do with research quality? There are potentials of enhanced quality in CI not fully recognized. Collaborative research needs reframing of research quality but the topic is complex with little consensus on frameworks for research quality. I also argue that research quality is conditioned on choice of concepts and model of research. How understand context and positionality for formulating research quality is an issue I explore. Some core questions in the article are; What is good /high quality in CI? To what extent need special considerations/criteria compared to "conventional" research? Can "traditional" quality concepts, such as objectivity, validity, reliability be used in a fruitful way? Or is new criteria required?

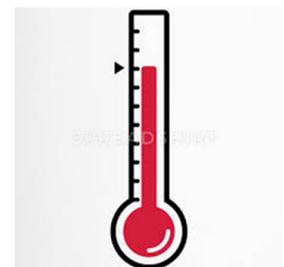
CI is here defined as research approaches including both participants from academia and university system (including research in R&D units organized outside formal university system recognized as part of scientific community) and participants from organizations and groups outside this context contribution to and having a stake in the knowledge creation focused on.

Research understood as collaboration between researchers in the academic system can be part of collaborative research, but is not the focus here. To make a distinction, this can be called research collaboration, but is not collaborative research if not non-academic participants are part of the collaboration.

Collaborative research (Heron, 1996) is here used an overarching denotation for a range of concept and approaches to scientific inquiry which wholly or in the main can be included in it, e.g. Action Research, Interactive Research, Practitioner Research, Participatory Action Research (PAR).

Why is consideration of quality important in CI? An initial view starting from dominant models of research not normally considering collaboration as an important dimension in scientific inquiry tend so see the addition of collaboration instrumentally. That is, as a feature which might increase efficiency or effectiveness of research, but also can disturb or even disrupt research quality from the perspective of standards normally considered in dominant research models. A value which can be enhanced is relevance and usefulness of research. This basic exchange is primarily including input and output or research, but do not touch the character of doing research. Bringing in non-expert laymen in the research process can improve access and utility of results as important inputs and outputs to scientific inquiry but on the other hand cause disturbances of research process detrimental to research quality and drive the research process into applied research and developmental research. The resources and time for high quality publications might be lost

A "standard" view of research quality still quite influential is focused on measuring or observation procedures. Research quality as the correctness in the measuring or observation, that is, whether if statements about research objects are



corresponding to existing objects in reality. The research model assumed here tend to be a detached spectator view of science (Dewey, 1929). The scientist is mirroring reality in conceptual structures (Rorty, 1979). Basics of research quality is internal validity, often understood as correct mirroring, and external validity, general character of the mirroring, and reliability, often repeatability of measurements, of research methods and instruments. In analogy to temperature observation validity means measuring the right things/objects of research (e.g. no systematic error in temperature observation), reliability means measuring things correctly (limited variation between observations of the same temperature condition), and objectivity means staying free from factors distorting measurement (e.g. influence from who is doing the measurement through such things as values and preconceptions). Figure 1 below is visualizing some assumptions of this paradigmatic research model; an instrumental view of science (Feyerabend, 1977), a passive, spectator view of knowledge based on visual metaphor and observation through sense impression (Dewey, 1929), a correspondence theory of truth, a non-subjective process where context and positionality is not included in the

research models, and often with an assumption that general, law-like patterns are more important or “real” knowledge than “anecdotal” knowledge of one or a few units study. These are core dimensions of positivist research models. Also qualitative research tend often to be influenced by this type of research model and quality understanding (Alvesson & Sköldbberg, 2009). I would like to point out that there are several advantages with this type of quality understanding and embedded research model, but there is a need for looking at other variants in order to fruitfully recognize the spectrum of research quality in CI.

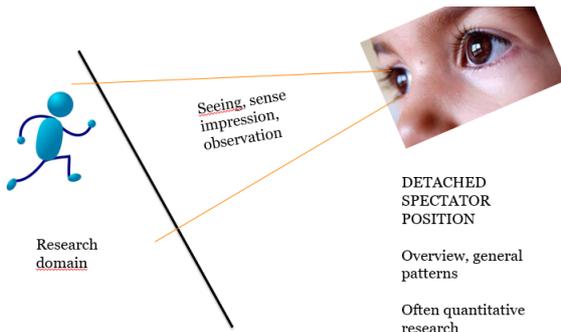


Figure 1. Detached spectator view of science

This research understanding can be contrasted with a view on research understood as situated actors with certain interests pursuing systematic learning processes where claims to knowledge is made (created and developed) and redeemed in order to establish their degree of trustworthiness to be given to them by competent inquirers. Today Mode 2 type of knowledge production is said to be expanding where different stakeholders are influencing and participate in steering research processes. Mode 2 research is rather unclear about what type of quality standards are important, more than standards where the stakeholders influences the direction of research leading to more useful outcomes, more dialogic process and more socially accountable and therefore more robust research. A positive aspect for CI is that the collaborative context is brought into the picture in understanding research and appropriate research models. But more useful and socially accountable research is not the full picture of CI as also necessarily involving quality of knowledge created.

'Mode 1' knowledge production	'Mode 2' knowledge production
Problems defined by academics and professional communities	Knowledge produced in context of application
Disciplinary knowledge	Transdisciplinary knowledge
Homogeneous sites/types of knowledge production	Diverse sites/types of knowledge production
Research as objective investigation	Research as reflexive/ dialogical
Quality control by 'invisible colleges'	New forms of quality control and required with social accountability

Figure 2. Mode 1 and 2 types of knowledge production (Gibbons, 1994)

We will consider different tactics in generating quality understanding, frameworks and criteria for CI. First we focus on the tactic of using traditional concepts in reconstructed forms.

TACTIC 1: RECONSTRUCTION OF TRADITIONAL QUALITY CONCEPTS

An example of an attempt to reconstruct traditional quality concepts is Lindhult (2008), which will be used as a point of departure. The scientific character of inquiry is focused on the systematic pursuit of learning in different spheres of human activity. In term of the research process, it is matter of clarifying choices and being transparent in the process, aiming at using the best approaches available in terms of inquiry strategy, design and method in order to increase the chances of high quality truth production. In terms of body of knowledge, scientific implies the aim to use the best available resources as well as through the inquiry make an amendment to this body – to produce new truths. Trustworthiness is here used as a conceptualization of truth, that is, the degree of which claims or constructions are worthy of our trust as a basis for action. The traditional conceptualization of truth as correspondence to a given reality is too narrow, particularly in the social field where human action and praxis is focused on. It is particularly inspired by Lincoln&Guba (1985), Dewey’s theory of inquiry (1939), Wittgenstein’s (1984) discussion of the character of certainty and doubt and Rorty’s philosophical critique of traditional truth concepts from a neo-pragmatic point of view (1998). I will here clarify the relation between science, inquiry, knowledge and truth with the aid of Dewey. Dewey is criticising the subjectivism of established epistemology. Development of knowledge cannot be done purely mentally, just inside the head. “Men have to *do* something to the things when they which to find out something; they have to alter conditions” (Dewey, 1929: 275). “Known object exists as the consequences of directed operations and, not because of conformity of thought or observation with something antecedent” (Dewey, 1929: 200). When we are able to drive the car, ride the horse, get the new product to work in a stable way, that is, secure intended and valued consequences projected as possibilities by our ideas that direct our action, we possess knowledge, we show intelligence. Knowledge is not in this view accurate conceptual mirroring of a given reality, but instead reality constructed and harnessed to human ends. That is, data, ideas, propositions, laws are means of knowing, not its objects (Dewey, 1929: 193). Knowledge is the result of competent inquiry, of intelligence;

“Were we to define science not in the usual technical way, but as a knowledge that accrues when methods are employed which deal competently with problems that present themselves, the physician, engineer, artist, craftsman, lay claim to scientific knowing.” (Dewey, 1929: 199)

CI also requires us to broaden the framework of quality, taking into account a broader range of stakeholders and dimensions. Particularly the role of action and practice, as well as practitioners and other involved parties, in defining and achieving quality is important to clarify. In order to specify quality we need to specify the aims of CI endeavours. Differences in aims imply differences in appropriate quality standards. I believe there are sufficient commonalities of aims in the field and community of CI, as well as the area of science at large, that it is fruitful to engage in a common discussion of quality.

The quality dimensions of CI are not in principle different from other types of research. The main difference comes from its collaborative and practice dimension; the aim of making a direct contribution to practice in the project and to derive value for science from this action/practice involvement. These differences, though not generating in principle different quality dimensions, widens the quality framework in action-research through including contributions to change and innovation, and also requires the development of more particular criteria in the area of scientific value of action and practice. We will here consider the widened quality framework and later focus on the scientific dimension.

Research quality is comprised of value or relevance, and trustworthiness, of the claims made to knowledge. I see trustworthiness as comprised of validity and reliability. A not uncommon view in the domain of qualitative and action oriented inquiry is that these concepts are not suitable for quality judgment of our work because the words are too much infiltrated by positivist ideology. I believe instead that it is preferable to reclaim the concepts in appropriate forms. I presume that also in CI we want soundness (validity) of our work as well as robustness of processes and solutions (reliability). We can also fruitfully expand their use. I see validity and reliability as something that we also want in change and transformation efforts. Practitioners want valid and reliable solutions to problems. Groups struggling for liberation want valid and reliable critical theories as well as alternatives to the actual situation. I as person participating in CI endeavours want valid and reliable improvement of my identity construction or competencies. Furthermore, an important element of inquiry is not only to achieve a higher degree of trustworthiness, but also to problematize and destabilize established views that are taken as trustworthy but may be illusory and maybe backed by established structures of dominant interests.

In conceptualizing truth as trustworthiness, a basic point is that truth in most cases is not one thing, it cannot be absolute, and is not only correspondence with a given reality. Trustworthiness is a pluralistic concept and practice in the sense that there are a variety of ways of achieving a higher degree of trust in (less doubt in) certain knowledge claims or constructions. Also validity and reliability as dimensions of trustworthiness is plural.

The capacity of our truth praxis of ascertaining trustworthiness is the basis of quality. It is analogous to that the trustworthiness of car driving is based on the goodness of car driving praxis, including the skills, procedures, instruments, roles and infrastructures that is part of its workability.

There are furthermore different dimensions of quality depending on the main character of aims focused on in inquiry efforts (table 1). I believe CI often is wavering between different types of aims. Often some type of aim is emphasized while other aims are played down or neglected. This may be quite all right, as long as it is made in a conscious way appropriate to the project and circumstances at hand. It is also often difficult to distinguish the focus on different aims in practice, but I

aims dimen- sions	research	practical	normative- political	personal
Orienta- tion to AR with focus on different aims	Focus of non-action oriented research, also part of most AR orientations	Pragmatic oriented AR (positivist or. AR), e.g. mainly Lewin, Scandina- vian AR	Critically oriented AR (also partly postmodern- ist and construction- ist or. AR), mainly PAR	Life oriented AR, practitioner oriented AR, e.g. educational AR, human inquiry (Reason)
Value (relev- ance)	Advance- ment of knowledge in a field of study, application of findings, dissemina- tion	innovation of product/ process, new understand- ing, new alternat- ives, self develop- ment	Democratisa- tion, liberation, social or wealth devel- opment, justice, support of political process, rationaliza- tion	Personal/life development professional development personal value/moral development
validity	Valid theories, data, knowledge claims	Workable, efficient solutions and praxis	Moral- political improvement (rationaliza- tion)	Authenticity, good life for individual and concerned, and one's community
Reliabi- lity	Reproduc- ible and accountab- le research process	Robust solution, stable praxis	Sustainabili- ty of improve- ment	Security, limited risks involved
Role of action and practice	Quality test of know- ledge claims	Instrumen- tal for change/ implemen- ting solutions	Political struggle for improve- ment of human conditions	Self- reflection, self- realization, identity formation
Role of practition- ers	Respondent/ use validation, research participants	Innovators, users, beneficia- ries	Subjects and actors of struggle	Partners in self- development

Table 1. Quality Dimensions in Collaborative inquiry

believe it is important to maintain the distinctions in order to make appropriate quality judgments. E.g. PAR, coming out of a context where more radical social transformation is called for in order to improve the situation of underprivileged groups (e.g. the southern tradition, see Brown&Tandon,1983), has generally a stronger emphasis on normative-political aims. An important emphasis is that people should do their own research in order to democratize knowledge production and as part of their self-liberation. On the other hand, scientific/research aims tend to be placed in the background where it often seems to be enough that the knowledge that people produce is judged to be useful by the people themselves in their struggle for liberation. While this is an important and neglected dimension of scientific/research quality that CI quite rightly is emphasizing, there are also other quality dimensions of this aim.

A similar differentiation of aims of inquiry often referred to is the distinction made between for me (the personal value and development), for us (the people wanting praxis improvement), and for them (those outside the context of change, requiring considering the wider significance of achievements). Between the us and the them there is a broader political-ethical definition of aims including such values as freedom, democracy and justice, e.g. “us” as part of a group aiming to improve the underprivileged status of certain groups such as workers, poor people, and handicapped. The broadening of the framework for quality can be connected to Habermas’ widened conceptualization of truth, implying that validity claims are made and redeemed in a broader range of dimensions; not only truth as correspondence with reality, but also efficiency/utility, normative rightness and authenticity/truthfulness (Habermas, 1984/87). Quality, as well as the understanding of action and participation in inquiry, is also dependent on orientations to inquiry, e.g. positivist, interpretative, critical, constructivist, pragmatic (Lindhult, 2002). The quality dimensions achieve different emphasis and conceptualization depending on dominant orientation. E.g. a good interpretation (interpretative orientation like hermeneutics) is able to integrate different pieces into a whole (coherence view of validity), while a good critical hypothesis (critical orientation) is able to unmask coercive power relations and can be vindicated through discourse free from distorting power influences (discursive view of validity).

A basic point of CI is that quality can be achieved from the point of view of different types of aims and thus a broader range of interested parties in a mutually beneficial way. According to Emery, the ideal is that these different interests can be furthered by the same activities. But it is important to point out that that good inquiry management is needed to achieve such mutually beneficial aims in a workable and efficient way. The aims do not combine harmoniously and automatically, but is an organizing and managing achievement by

Validity dimension	Measures	Potential advantage of CI	Potential weakness of CI
Correspondence	Construct development, observation, measurement	Measurement/testing possibilities, grounded conceptualization	Disturbing research domain
Coherence	Triangulation, interpretation (unified pattern)	Richness and variety of experience/data	Overburdened by experience, fragmentation
Discursive	Respondent validation, member check, Democratic dialogue (communication free of domination)	Broader discursive validation among concerned/competent parties	Arranging good fora difficult (e.g. democratic, free of domination, inclusive), dissensus
Practical (workability)	Test by application/use	Experimentation possibilities in field/live context	Limited control of conditions
Dialectic	Comparative testing of competing claims	Broader range of claims, e.g. from different parties	Polarization, conflict
Perspectivistic	Using plurality of perspectives in analysis	Multiple embodied perspectives through participants	Dominance of some perspective

Table 2. Validity dimension and CI

those responsible for the action-research project. This is a basic challenge in managing CI. CI provides particular potentials for creating trustworthiness compared to other approaches to inquiry. At the same time, CI also has its particular weaknesses and risks in terms of trustworthiness. A core issue of inquiry management is to exploit these potentials and at the same time minimize weaknesses. As an orientation for inquiry management and judgment of quality in CI, table 2 gives an overview of different dimensions of validity and its relation to CI.

Also reliability and objectivity can be reconceptualised to better suit the character of CI, see table 3. Here, Lincoln & Gubas (1985) different dimension in their definition of trustworthiness as quality criteria can be seen as a step in this direction. This expansion of the quality concepts open up for different ways that participants in CI can contribute to quality, e.g. by contributing to good interaction and dialogue, review of emergent findings, adaptivity to aims etc.

The advantage of using established concepts for describing and assessing quality is that it can integrate and be part of long existing discourses on research quality. Validity, reliability and objectivity are here central conceptual resources having a deep tradition to relate to. Thus CI can be discussed in this longstanding discourse using the same concepts. The disadvantage is that the diversification in perspective and approaches in

Reliability dimensions	"Normal" Research methodology understanding	Lincoln & Guba (1985)	Action research/ interactive research
How researchers can create reliability	Instrumental reliability	Dependability	Adaptive reliability (e.g. dynamically regulated process)
How external can contribute to reliability	Repeatability	Auditability (e.g. audit trail)	Reviewability
How to make claims independent of researchers and other subjects (objectivity)	Objectivity in work forms	Confirmability	Interactivity (good dialogue) in process

Table 3. Reliability and objectivity expanded

science developed since the 1970s has also questioned the continued use of these traditional concepts. They are in some communities of researchers seen as tainted by their traditional, often seen as positivist, association and institutionalization. The divide can be seen since long in the debate between qualitative and quantitative camps. CI is here often associated with the qualitative side, although researchers in the CI field tend to see other type of distinctions as more important.

But a position is that it is better leaving these traditional quality concepts behind and talk about quality in other more appropriate ways. Furthermore, it is easy to be coopted by traditional views on science when using traditional concepts through which scientists describe what they do. Better then to change to another quality vocabulary. The argument against this is that the reconstruction above is made in a way that it can accommodate different views on science, and particularly incorporating important dimension of CI. There no monopoly on how concepts is conceptualized, but instead need to be adapted to the situation and domain of use.

On the other hand institutionalized use of traditional concepts means the discourse on quality is not on the same term but often is a kind of guerilla war on dominant conceptual understanding. In trying to understand the traditional concept in new more suitable ways for CI, the risk is that it is confusing and difficult to understand because of the existing ingrained understanding. An experience of this author is that it is easy that traditional textbook understanding makes people impregnated from other understanding quality. E.g. the role of CI in basic textbooks like Bryman (2008) is rudimentary near to awkward.

On the other hand, all types of scientific approaches need to deal with the fundamental issues that these quality concepts are dealing with: to what extent is research trustworthy (true)? That is, is it valid and reliable? Without a sufficient degree of trustworthiness, any scientific activity or result becomes in doubt if it

really is producing something that can be called knowledge. And science need to produce something that is not too much dependent on the person expressing a knowledge claim. Something that can be accepted as having a degree of trustworthiness beyond this personal expression and claim to knowledge. That is, it has to have a degree of objectivity, not too much of subjectivity in this sense. This does not deny the importance of the subjective as a necessary starting for any research, and as an important research "instrument" in interpretative oriented research. The I of science, the actor in research, is an important ingredient in any research activity (Brown, 1996) and its capacity for quality. We here turn to the next tactic; introducing new criteria.

TACTIC 2: INTRODUCE NEW CRITERIA

There are many researcher working in the area of qualitative and CI who questions the use of the traditional quality concepts as they are too much embedded in positivist and instrumental views on science. Maybe the most well-known effort to reconstruct research quality concepts and introducing new criteria has been made by Lincoln & Guba (1985, 1989), using trustworthiness (similar to the use above) and authenticity instead as leading concepts. A point of trustworthiness is to adapt the strong claims inherent in traditional concepts to a more contingent and uncertain situation of claims to knowledge in social science (which also often is the situation for natural science). E.g. instead of claiming generality of knowledge claims (often called external validity), transferability is instead used as a quality dimension of trustworthiness. Authenticity is relevant as it focuses on different stakeholders/participants and the value of knowledge claims for them. Authenticity is here defined in five dimensions; fair picture, ontological authenticity, pedagogic authenticity, catalytic authenticity and tactical authenticity. These criteria is provocative, but also somewhat confusing. Authenticity is somewhat trading on a perspectivistic ontology; that truth is truth for each actor. But at the same time authenticity is fair representation of views and the value or usefulness of an investigation for different participants. But it is not integrating the knowledgeability of actors and their capacity for inquiry as a resource for research quality. According to Bryman (2008) the proposal of Lincoln&Guba has not much influenced social science, and it is common to action research. Still the integration of value for participants and practical results in their quality framework is relevant for CI.

Lincoln & Guba is touching on but not fully focusing on CI. An example of a quality framework proposal in the field of Action Research is (Herr & Anderson, 2015) which has a focus on goals in inquiry, see figure below.

Goals of Action Research	Quality/Validity Criteria
The generation of knowledge	Dialogic and process validity
The achievement of action-oriented outcomes	Outcome validity
The education of both researcher and participants	Catalytic validity
Results that are relevant to the local setting	Democratic validity
A sound and appropriate research methodology	Process validity

Figure 3. A quality framework related to goals of inquiry (Herr & Anderson, 2015)

The proposal by Herr & Anderson (2015) has connections to the proposal earlier where quality was based on trustworthiness and value and maintaining the concept of validity, with a wider spectrum of dimensions. Value is specified as goals of inquiry, and validity is here equal to trustworthiness. This framework is, as far as I know, one of the most interesting one's developed in the field. Still it raises a number of questions to be dealt with (see figure below), indicating that also this framework needs further improvement.

Goals of Action Research	Quality/Validity Criteria	Erik's questions
The generation of knowledge	Dialogic and process validity	Knowledge for whom? Knowledge interests? Democratic aspect here?
The achievement of action-oriented outcomes	Outcome validity	Why not consider all outcomes that participants aims for?
The education of both researcher and participants	Catalytic validity	Catalytic of what? Learning for knowledge generation - change/transformation?
Results that are relevant to the local setting	Democratic validity	Is not democracy related to relevance for all participants? Power and fair influence on results?
A sound and appropriate research methodology	Process validity	Vague, specification (knowledge, practice)? Repetition of criteria

Figure 4. Critical questions to the Herr & Anderson (2015) framework

In sum, the answer depends on how to describe collaborative research, what is considered to be important qualities, that is, chosen research model, which in appropriate ways touch on the following;

- Good knowledge quality - depends on eg. form of knowledge and for whom (eg practical or scientific contribution)
- Good change quality - depends on what kind of change is considered central
- Good participation quality - Actual participation of which, opportunities, conditions, effects for others
- Good research process, such as "logical" steps, dialogue, mutual learning

TACTIC 3: POINT OF DEPARTURE IN ESTABLISHED DEFINITION OF RESEARCH – AN ACTION RESEARCH AS EXAMPLE

Another tactic is to start from established definitions of research in order to generate dimensions of research quality. We give here an example from Action Research field.

“Action research is a participatory process concerned with developing practical knowing in the pursuit of worthwhile human purpose. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities.”
(Reason&Bradbury, 2001: 1) .

The following characteristics of action-research as a form of CI can be identified in this definition, which Reason&Bradbury see as based in as participatory worldview; Emergent developmental form, Human flourishing, Participation and Democracy, Practical issues, Knowledge-in-action. From these characteristics a quality framework can be generated, see figure 5 below (see also Herr&Anderson, 2015).

Developing a quality framework from a definition anchored in a worldview which is in general rather different from what is common in science leads to quite different understanding of research quality. In this formulation it is are rather challenging to use it in quality assessment of concrete research projects and practices. There is development to be done, but the framework is helpful in finding alternative ways to understand quality in CI.

Dimensions of participatory Worldview	Characteristics of Action Research	Questions for Validity and Quality
Participatory evolutionary reality	Emergent developmental form	Questions of emergence and enduring consequences
Meaning and purpose	Human flourishing	Questions about significance
Extended epistemology	Knowledge-in-action	Questions about plural ways of knowing
Practical being and acting	Practical issues	Questions of outcome and practice
Relational ecological form	Participation and democracy	Questions of relational practice

Figure 5. A quality framework developed from the Reason&Bradbury (2001) definition of Action Research

TACTICS 4: BASIS IN COMMON RESEARCH MODELS WITHIN THE RESEARCH FIELD

Research models are models for doing good/high quality research/knowledge development. They are suitable for different situations, aims and type of knowledge to be developed. Often they are depicted to visualize the logic of inquiry, e.g. deductive, inductive or abductive, or as a rational process in different steps where different methods and procedures are used to enable quality. CI tend more to focus on additional features not normally depicted in “standard” models. The position and role of the researcher in relation to research domain and object is an important dimension (e.g. detached, insider, practitioner, innovator, spectator,

interpreter, reflective practitioner etc.). The degree of involvement of actors in research domain/stakeholders is another important dimension. Research models involves operative, design and strategic levels. There are also models including the context of research as condition for research as resource and restriction. Often some dimensions and features and focused on while others are more in the background depending on perspective and purpose. As an example, figure 6 below gives an example of common variant of research model in the field (see e.g. Greenwood&Levin, 1998; Gustavsen, 1992; Lindhult, 2005).

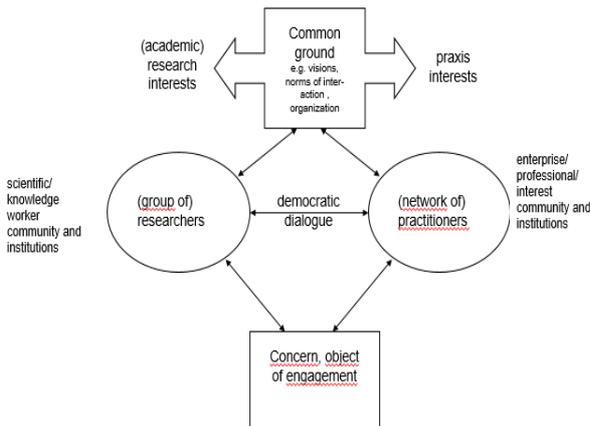


Figure 6. A dialogic model of Collaborative Inquiry (Greenwood & Levin, 1998; Lindhult, 2005)

A possibility to derive research quality indicators is to look for areas where deficiencies in quality can be identified and can occur in practice. This is a mode model based way to understand research quality. The figure below points to a number of area where deficiencies may occur and thus active management is recommended.

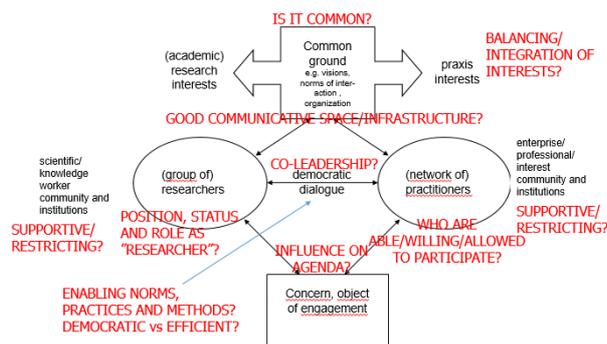


Figure 7. Model based conceptualization of research quality

Such a model based approach becomes rather specific, making it difficult to identify more general quality frameworks for CI that the community of researchers can relate to. A possibility it to look for general features of CI which can be a focus for quality more generally in the CI community.

TACTICS 5: PARTICULAR FEATURES OF COLLABORATIVE INQUIRY ON DIFFERENT LEVELS

We have seen that CI has its particular features and potential advantages according to different views on different levels of research from worldviews to operative practices and methods. Is collaborative inquiry;

- A question about the research effectiveness of the methodology? (there will be "better" data, knowledge or value/utility)
- Or about research design that is more participatory, action- and interaction-oriented? (e.g. "suitable" for some research purposes)
- Or about ideals, values and paradigm for research - participatory worldview / paradigm / research ideology?

Can these features be identified and focused on in understanding the special issues of quality in CI? We have already seen that CI can be seen as operative specific e.g. in participant validation and dialogue, or as worldview. A proposal is to look for particular features of CI on the middle level of research design, see figure 8.

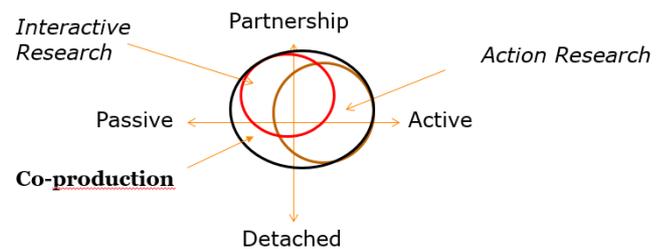


Figure 8.. Collaborative inquiry as research design

To the established research designs experimental, survey, longitudinal, case study, and comparative (Bryman,2008), CI is adding active and interactive as important potentials in science. A core advantage of an active or action oriented research design is that action and experimental development, test and validation of knowledge claims can be done of would not be so if researchers as passive. Such a role can help to generate objects or situations of research which otherwise would not exist. A more partnership or interactive oriented role compared to a detached role is advantageous when insider knowledge and resources is to be mobilized, or when direct interaction and dialogue is an important way to generate knowledge and validate knowledge claims.

		Research Question/Purpose	
		To Describe/Explain	To Design/Intervene
Research Perspective	Detached Outside	Basic Science With Stakeholder Advice 1	Policy/Design Science Evaluation Research For Professional Practice 3
	Attached Inside	Co-Produce Knowledge With Collaborators 2	Action/Intervention Research For a Client 4

Figure 9. Research design choice in Engaged Scholarship (Van de Ven, 2007)

The specifics in choice of research design in CI is also depicted in the framework for Engaged Scholarship (van de Ven, 2007), see figure 9, where the choice is dependent on two dimension; detached or attached research perspective and explanation or intervention as research purpose. The proposals also touch on the importance of considering positionality in CI.

POSITIONALITY AND CONTEXT

In the discussion so far, the position of the researchers in relation the research object and subjects has become more and more in view. A core assumption in traditional views of research is that the position of researcher is, or should be, outside the bounds of the research model in order not to disturb research object.

If research understood as situated actors with certain interests pursuing systematic learning processes where claims to knowledge is made (created and developed) and redeemed in order to establish their degree of trustworthiness to be given to them by competent inquirers, then position of researchers, and groups of co-researchers in CI becomes important. Herr & Anderson (2015) is explicitly discussing positionality and the positions of the researchers, pointing to different variants and combinations of outsider and insider roles and their advantage and disadvantage. Different positions provides social vantage points more or less favourable for high quality knowledge creation. This insider – outsider dimension of positionality can be complemented with the degree to which different stakeholding actors are participating in research to also include this dimension in order to mapping and makes choices about positionality combinations, see figure 10.

If the researcher's position is recognized in the research model, then also the situation and context in which researchers are embedded comes in view. It is not only that research actors are unavoidable cultural being and thus embedded in context which interpretative scientific orientations emphasize, see figure 11. It also means that culture is a necessary resource for knowledge generation of symbolically mediated claims and thus high quality knowledge. As Gadamer (1975) say, interpretation require the fusion of cultural traditions of the interpreting researcher and meaningful objects

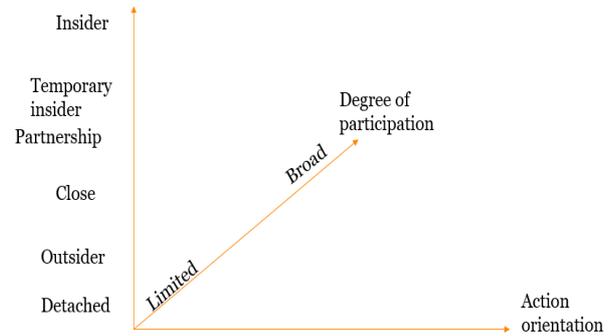


Figure 10. Mapping positionality

in the cultural tradition of research domain where dialogue is the medium. Thus quality is related to the goodness of this dialogue between positioned and context embedded actors. As insider this is in the first instance easier, but sometimes outsider positions is valuable to unveil implicit preunderstanding in the research domain. E.g. how innovation is understood in technology and product centric companies institutionalized in existing thinking and practices.

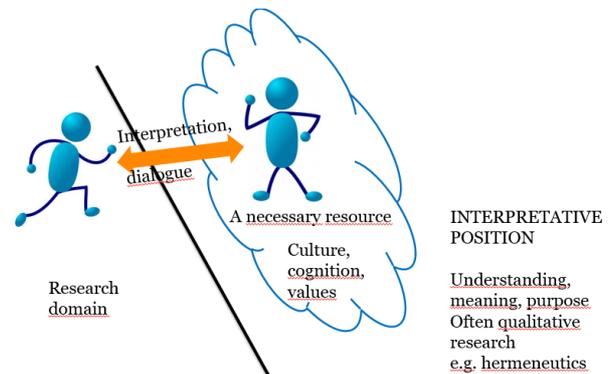


Figure 11. Interpretative position of research

A pragmatic or practice based understanding of positionality sees inquiry as always starting from a situation, where the context is not only embedding inquiry but inquiry is also transformative of situations from undetermined or problematic to determined and resolved so that the interruption of practice can be removed and the flow of activity is enabled and restored (Dewey, 1939). Here Research models from a pragmatic

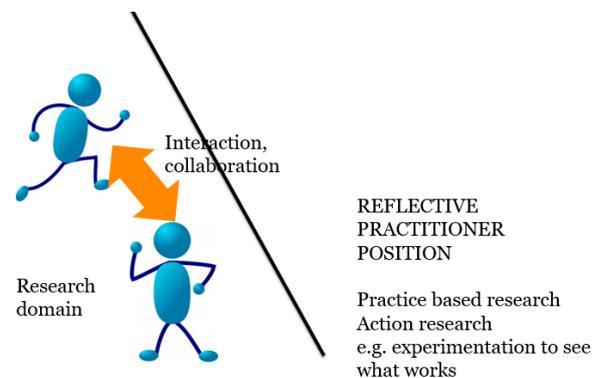


Figure 12. Reflective practitioner position

or praxis oriented view thus takes a point of departure in actors positioned in specific situations and context. Figure 13 below gives an example of such a research model, which problematized linear models of research seeing science as a flow from basic research to application and diffusion.

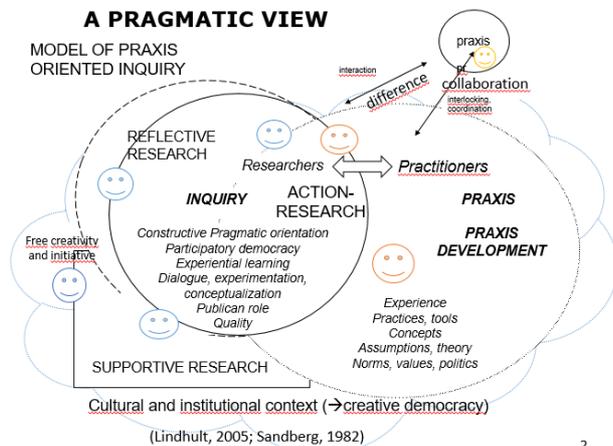


Figure 14. Constructive-pragmatic research model (Lindhult, 2005)

The blue faces symbolizes different outsider positions which can support reflection, and the yellow ones depicts different insider positions in inquiry. Different combinations of these positions is possible and often beneficial for inquiry. It is also influencing the way a critical vs a more action oriented CI design can be achieved (Johansson & Lindhult, 2008).

Positionality in research raises many issues: Opportunities in different positions and roles? Challenges and risks? How combine different positions? Different emphasis over time? Supports (restrictions) for different roles? And not the least; the meaning of and implication for research quality in different positions and roles?

There are different ways to deal with and manage positionality so as to use it to increase research quality and minimize disadvantage;

- Reflection and reflexivity (use 1st and 2nd person inquiry)
- Manage co-productive research constellation, e.g. as interactive learning and inquiry platform
- Journaling for continuous process reflection
- Experienced supervisory group in coproduction/action research
- Use and develop relational skills for good communication and social connections
- Critical friends for reflective support
- Peer review to achieve reflective distance
- Help others to be understand and be reflexive about role and responsibility and find fruitful collaborative relations and task division
- Communicate/manage role expectations
- Use appropriate research (and development) methodologies, tools and quality standards.

CONCLUSION

There is a need for reconstructing the understanding of research quality in CI in order to better depict its scientific potentials as well as its challenges. In maintaining standard quality views, CI tend to be marginalized and seen as a disturbance of research quality.

First, CI understood as research which involves a broader constellation of actors beyond academic and university oriented institutions means that the qualities in research which non-academic participants value need consideration. This can be done also in non-collaborative research, but then it tends to be done in a way that such more practical qualities are focused on as implications of research, not as something that affects understanding of research quality as such. The scientific quality of research is distinguished from its value for different purposes and stakeholders.

The result and contribution is an overview of broader and varied ways to understand research quality in CI. This broader understanding of research quality can help to legitimate and widen the space for CI, and in the long run to reforming academic research and university system breaking the monopoly of academic knowledge and making it more interactive in its knowledge production. Specifically it points to the fruitfulness and viability for participatory innovation to be married with CI.

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