

Action Research

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Agenda

1. Action research
2. Participatory action research
3. The action research process
4. Quality assurance

1. Action Research

Action Research

Action research is a research methodology in which the researcher

- Iterates over **applying**, evaluating, and revising a theory
- To **cause change** and build out the theory

Key is

- The active involvement (the “action” and/or “intervention”) and
- Its expected effects in the world

The researcher is not just a distant observer!

Duality of Purpose

The goal of action research is to

1. Improve practice
2. Build out a theory

The Action Research Process

The action research process uses established research methods to

1. Set initial goals
2. Iterate over
 - a. **Choose focus**
 - b. **Plan the action**
 - c. **Execute the action**
 - d. **Observe the outcome**
 - e. **Build out the theory**

The researcher is not necessarily participating (executing) the plan themselves

- An outside researcher is a facilitator
- An inside researcher is a participant

Three Motivations for Action Research

Technical action research is interested in

- Improving control over outcomes

Educational action research is motivated by

- Helping practitioners act more wisely

Critical action research is motivated by

- Emancipating practitioners

Variants of Action Research

Action research (AR) is a

- Research methodology (as before)

Participatory action research (PAR) is action research in which

- The researcher is an active participant of the whole research process

Critical (theory) participatory action research is action research in which

- The research uses critical theory as the underlying epistemological position

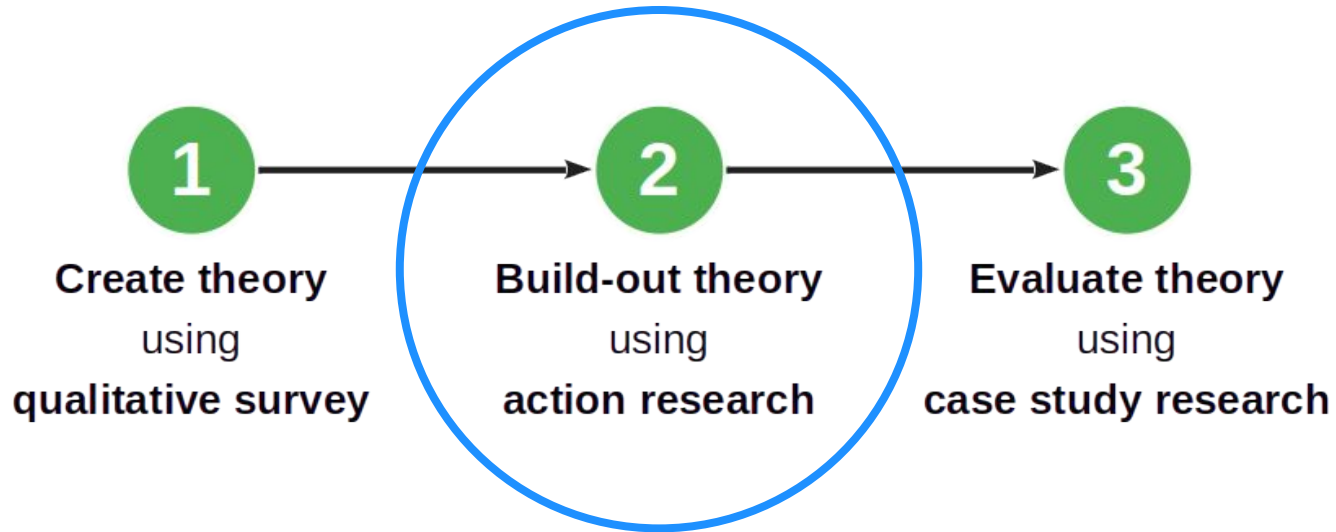
Critical theory seeks

- “to liberate human beings from the circumstances that enslave them” [1]

As a Research Methodology Category

1. Action research (Lewin, 1951)
2. Participatory action research (McIntyre, 2008)
3. Critical participatory action research (Kemmis et al., 2014)

Action Research in a Larger Research Design



A Sweet Spot for Action Research

Participatory action research is a good choice if

- The researcher has access to appropriate cases
- The theory under development is evolving quickly
- There is significant tacit knowledge with the researcher
- Participants expect to learn/benefit from the research

Industry Consulting as Action Research

In industry consulting (paid or unpaid), a researcher provides advice to practitioners

- Researchers are called upon to help improve the outcome of practitioner work
- They do not have to be participants (of implementation), but may simply advise

Industry consulting on new, novel topics, works well with action research

2. Participatory Action Research

Participatory Action Research

Participatory action research is action research in which

- Researchers and practitioners perform the research jointly and collaboratively

For the practitioners, this has the following consequences; they

- Can understand and develop their practices from within case
- Can develop a joint, reflective, language of critical debate
- Can form communities of practice based on the research

Participatory action research is a “practice-changing practice” [K+14]

Critical Participatory Action Research

Critical participatory action research is action research that

- Empowers participants to change practices in the face of
 - irrational
 - unsustainable
 - unjust situations

With this addition of critical theory, we are leaving positivism

- No objective independent reality but rather
- Individual and collective action and reflection



996.ICU

What is "996"?

996 working, ICU waiting.

A "996" work schedule refers to an unofficial work schedule (9a.m. – 9p.m., 6 days a week) that has been gaining in popularity. Serving a company that encourages the "996" work schedule usually means working for at least 60 hours a week.

Laws and Regulations

Labour Law of the People's Republic of China

Article 36:

The State shall practice a working hour system wherein labourers shall work for no more than eight hours a day and no more than 44 hours a week on the average.

Article 39:

Where an enterprise cannot follow the stipulations in Article 36 and Article 38 of this Law due to the special nature of its production, it may, with the approval of the administrative department of labour, adopt other rules on working hours and rest.

Context Specificity

Participatory action research is context-dependent research

Every research project is different and so are the employed methods

Makes action research a rather loose methodology beyond the core process

No Fixed Formula

Participatory action research has no single theoretical framework

- A roundabout way of saying that as a methodology, it is still evolving

Roles in Participatory Action Research

Everyone is a participant, some are

- Researchers
- Practitioners

You are either a researcher or a practitioner

- Researchers are temporary participants
- Practitioners are typically (more) permanent participants

Academic Researchers vs. Practitioner Participants

In participatory action research, academic researchers

- Are participants

But how do they become participants?

- Do they have to be invited?

Also, can you be both?

Participation vs. Involvement

Participation

- Participants are stakeholders
- Participation may be uneven

Involvement

- No agency or ownership

3. The Action Research Process

The Process and Activities of Action Research

The action research process and its activities

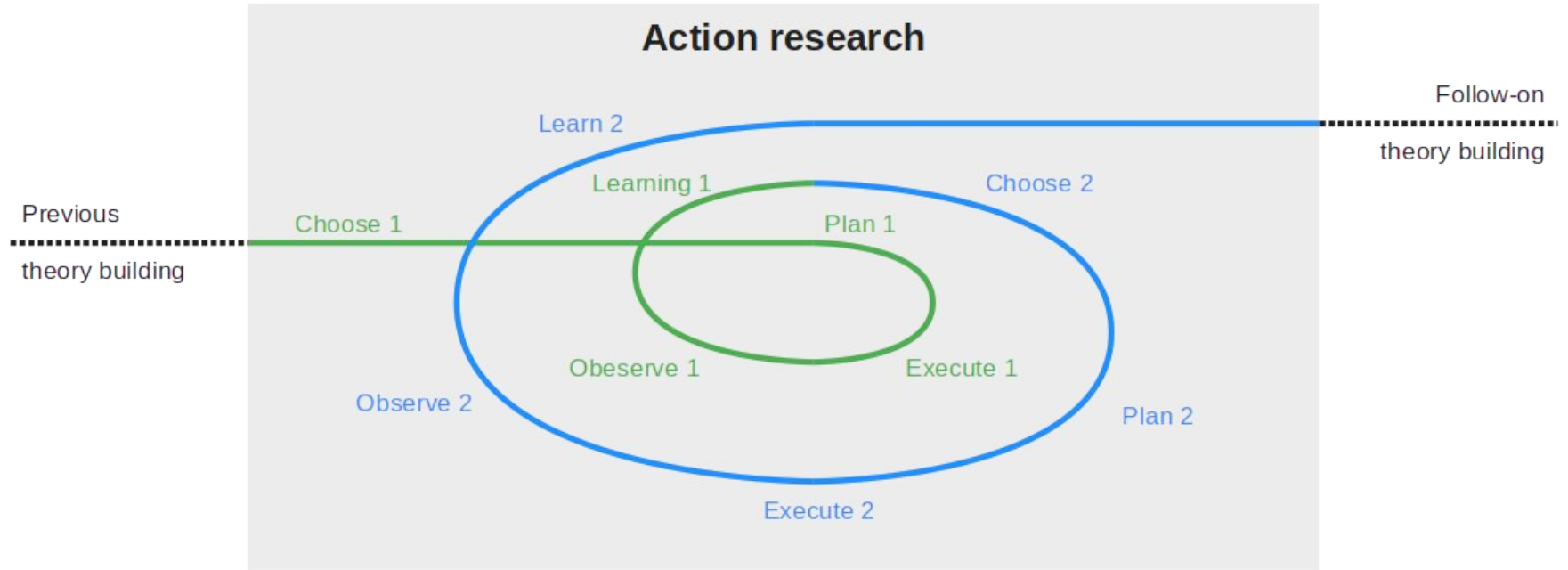
1. **Set initial goals**
2. Iterate over
 - a. **Choose focus**
 - b. **Plan action**
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 - d. **Observing outcome**
 - e. **Build out theory**

Properties of the Action Research Process

The action research process is

- Iterative
- Incremental
- Repetitive

Action Research Process in Context



Activity Names by Methodology Variant

Generic	Action research (Lewin, 1946)	Participatory AR (McIntyre, 2008)	Critical PAR (Kemmis et al., 2014)
–	–	Questioning	–
Choosing	–	Investigating	Reconnaissance
Planning	Planning	Developing	Planning
Executing	Executing	Implementing	Enacting
Observing			Observing
Learning	Fact-finding	Refining	Reflection

1. Set Initial Goals

You choose action research, because

- Your theory is young
- You may have a project at hand
- The project can benefit from your help

You offer the project to help

Example PAR Microservice Integration Initial Goals

After an initial qualitative survey, we have our initial theory at hand, codified as a

- Handbook of microservice integration best practices

The initial goal (research question) now is to

- Iteratively build out the theory through incremental use and reflection

Which happens to nicely fit participatory action research

2a. Choose Focus

During **choosing (focus)**, you

- Choose which aspect of your theory to build out

Criteria to choose focus by can be

- Strategic: Immaturity of theory aspect chosen
- Pragmatic: Aspect readily available in project

Action research will prefer pragmatic choices!

- Because it is about helping practitioners

Example Choosing Focus

A strategic choice: Database-based communication

- You motivate or wait for the project to turn to database-based communication

A pragmatic choice: Event-bus-based communication

- Project is currently working on event-bus based communication

Planning

During **planning**, you

- Choose an appropriate method to investigate the aspect

Example Planning

With the handbook of microservice integration at hand, you choose

- Joint design sessions to determine a target architecture
- Pre-session and post implementation practitioner interviews

Execution

During **execution**, you follow your plan and

- Participate in the project working on the aspect of choice

Example Execution

As you participate in the project, you follow your plan:

- You interview the practitioners before the first session
- You participate in the design sessions

Observation

During **observation**, you continue with your plan and

- Observe the results of the execution using the methods you chose

Example Observation

After execution, you continue with the plan:

- You wait for the implementation (or also participate)
- You interview the practitioners after the implementation

Learning

During **learning**, you

- Analyse the observed data towards the aspect of interest

You may still be following your plan if it also laid out the analysis and interpretation methods

Example Learning

After observation, you now

- Analyze the interview data towards the aspect of interest
- Apply more methods as needed

Closing

Based on what you learned, you

- Either continue with another iteration of action research
- Or move on to the next methodology in your research design

4. Quality Assurance

Summary

1. Action research
2. Participatory action research
3. The action research process
4. Quality assurance

Thank you! Any questions?

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