QUALITATIVE EMPIRICAL RESEARCH METHODS

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Overview

- Qualitative research: an introduction
- Two qualitative research methodologies:
  - Case studies
  - Action Research
- Q&A!

Who am I?

- Dr Silvia Masiero
- Research interests: information & communication technology for development (ICT4D), ICT use for emergency management, digital platforms for socio-economic development
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Rules of today…

- 1h 45’ session, 15’ break midway
- We will keep this lecture interactive – please do feel free to share your past experiences with qualitative research, ideas for your Master’s thesis project, or any doubts you may have at this stage.
- Please do ask questions at *any time*! (Final part of the session is for additional questions and discussion.)

Qualitative Research: An Introduction

Starting from you…

- Have you already conducted (some form of) qualitative research? What was your experience with it?

- Think of, for example, your bachelor's thesis or any work experiences in which you have come across qualitative methodologies (case studies, action research…) and methods (interviews, participant observation…)

- What did you find useful about these methodologies? What did you find challenging?

Your reflections!

A key distinction… (from Myers, 1997)

- **Quantitative research** was originally developed in the natural sciences to study natural phenomena. Examples include survey methods, laboratory experiments, formal methods (e.g. econometrics) and numerical methods such as mathematical modeling.

- **Qualitative research** was developed in the social sciences to enable researchers to study social and cultural phenomena. Examples include action research, case study research, ethnography and grounded theory.

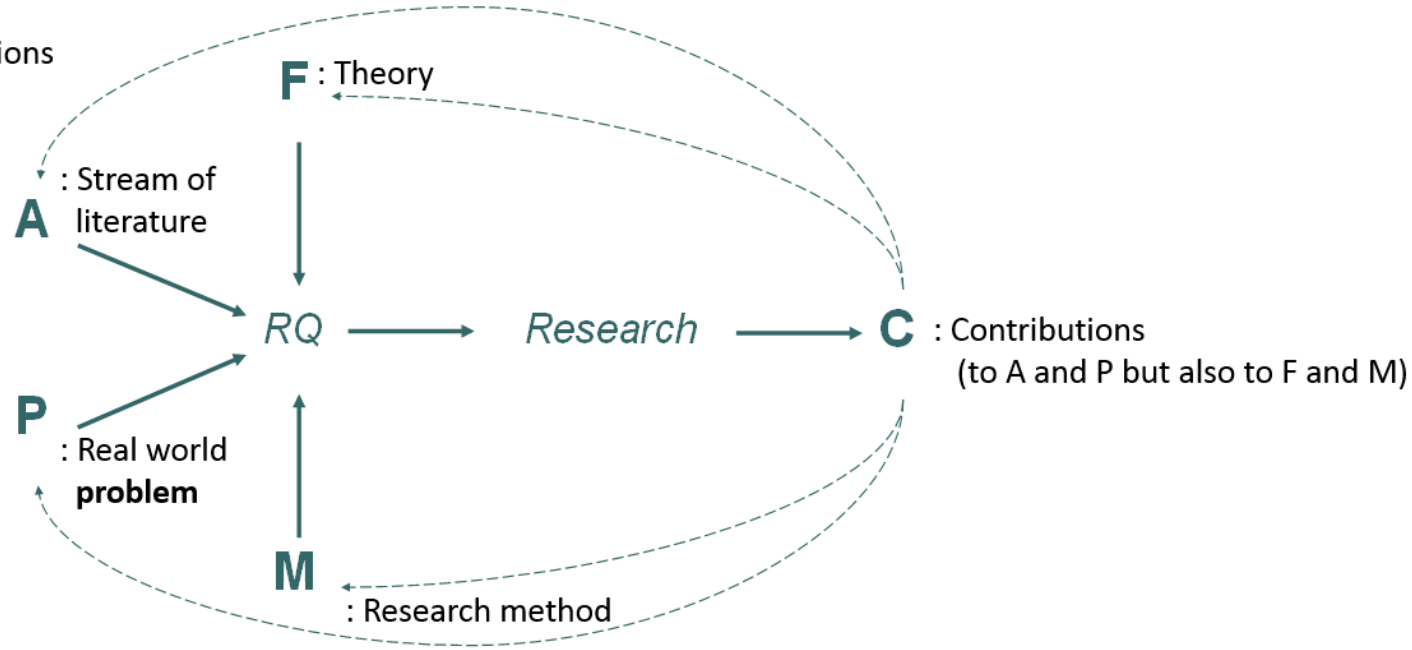
In other words…

Qualitative research allows the researchers to see and understand the **context** within which decisions and actions take place. It is the context that helps explain why someone acted as they did.

This context (or multiple contexts) are best understood by *talking to people*.

Research Design

- **A** area of concern
- **P** real-world problem
- **F** framing
- **M** method
- **C** contributions



To sum up…

Qualitative research uses understanding of a context as a route to answering **a research question** and, by doing so, making a **contribution** to one literature (or more!)

What sort of contribution (to theory; to practice) are you imagining for your Master's research?

“Which methodology should I go for?”

The Structuring Elements of Social Research (Crotty, 1998)

Structuring elements of social research

(Crotty, 1998)

Structuring Elements of Social Research (Crotty, 1998)

- **Epistemology: our assumptions about knowledge and how it can be obtained**
- Theoretical perspective: the philosophical stance informing the methodology and providing context for the process and grounding its logic and criteria
- Methodology: the plan of action, process or design lying behind the choice and use of particular methods
- Methods: the techniques or procedures used to gather and analyse data

Research Epistemologies (from Myers, 1997)

- All research is based on some underlying assumptions about what constitutes valid knowledge and which research methods are appropriate.

- Epistemology specifies such assumptions and therefore, needs to be clarified before asking the questions on "which methodology" to use.

- Here we rely on Orlikowski & Baroudi (1991) who propose three epistemological paradigms (sets of assumptions): **positivist**, **interpretive** and **critical**.

Positivist research

- Positivists generally assume that reality is **objectively given** and can be described by measurable properties, independent of the observer and his or her instruments.
- Positivist studies generally attempt to **test theory** to increase the predictive understanding of phenomena.
- Orlikowski and Baroudi (1991) classified IS research as positivist if there was evidence of **formal propositions**, **quantifiable measures** of variables, **hypothesis testing**, and the drawing of **inferences** about a phenomenon from the sample to a stated population.

Interpretive research

- Interpretive researchers start out with the assumption that access to reality (given or socially constructed) is only through **social constructions** such as language, consciousness and shared meanings.

- Interpretive studies generally attempt to understand phenomena through the **meanings** that people assign to them: “what we call our data are really our own constructions of other people’s constructions of what they and their compatriots are up to” (Geertz, 1973, cited in Walsham, 2006: 320).

- Associated to methodologies that allow researchers to access such interpretations, such as those described in this session (case studies, action research…)

Critical research

- Critical researchers assume that social reality is historically constituted and that it is produced and reproduced by people.
- Although people can consciously act to change their social and economic circumstances, critical researchers recognise that their ability to do so is constrained by forms of social, cultural and political **domination**.
- The core task of critical research is seen as being one of **theorisation** and **transformation**, where the restrictive and alienating conditions of the status quo are brought to light and challenged.

…a clear distinction?

To recap…

- To answer the question on “which methodology” to use in our research, we first need to clarify our assumptions on what constitutes valid **knowledge** and how it is produced
- Here we follow the convention (Orlikowski & Baroudi, 1991) that identifies three main **epistemologies**: positivist, interpretive and critical
- Our choices in terms of methodology – and, flowing from it, the methods for data collection and analysis – will be developed in coherence with our epistemological views.

…all clear so far? :-)

Qualitative research methodologies: Case Studies

Case study research

- “The most common qualitative method used in information systems” (Orlikowski & Baroudi, 1991)

- Case studies consist of an array of methods (including interviews; observation; focus groups) that afford accessing the **lived reality** at the centre of the research.

Case studies

Empirical studies that:

- Investigate a **contemporary phenomenon** in detail;
- Within a **real life** context;
- In which **multiple sources** of evidence are used (Yin, 2013).

- They can be used in three modes: explanatory, descriptive and exploratory.

Case studies

- A detailed study of a single social unit
- The social unit is usually located in one physical space, the people making up the unit being differentiated from others who are not part of it.
- The unit has clear **boundaries** (e.g. an organisation) which make it easy to identify.

Case studies

«Case study research in business uses empirical evidence from one or more organisations where an attempt is made to study the subject matter in context. Multiple sources of evidence are used, although most of the evidence comes from interviews and documents.»

(Myers, 2009)

Case studies

- A case study research design usually involves qualitative methods, but quantitative methods are sometimes also used.

- Case studies are good for **describing**, **comparing**, **evaluating** and **understanding** different aspects of a research problem.

When to use case studies?

- A case study is an appropriate research design when you want to gain concrete, **contextual**, **in-depth** knowledge about a specific real-world subject.

- Case studies are often a good choice in a thesis or dissertation. They keep your project focused and manageable when you don't have the time or resources to do large-scale research.

- You might use just **one** case study where you explore a single subject in depth, or conduct **multiple** case studies to compare and illuminate different aspects of your research problem.

Some stories…

- Masiero (2014) *Imagining the state through digital technologies: a case of state-level computerization in the Indian Public Distribution System*. PhD thesis, The London School of Economics and Political Science (LSE)

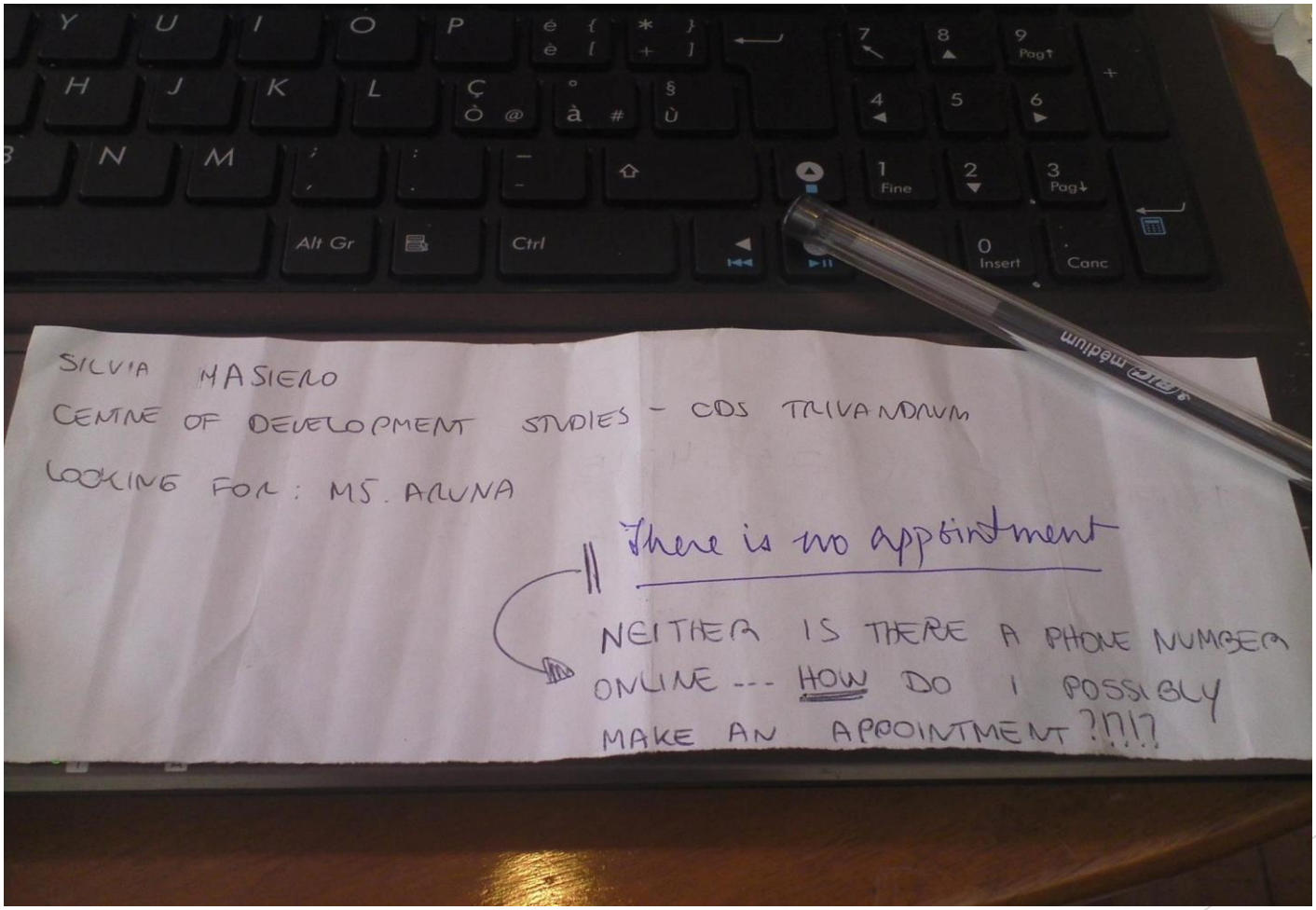
- Research on citizens' process of **image formation** on the state at a time in which the main national food security programme, the Public Distribution System (PDS), was undergoing end-to-end computerisation

- What **meanings** did state entities assign to technologies, and how did below-poverty-line recipients of the PDS understand such meanings?

Some stories…

Gaining access…

Maintaining access (or at least trying)…



Style of involvement…

Interviewing as an entry point into participants' lived realities…

…being aware of positionalities!

Research ethics!

A frequently asked question…

- *How do you generalise from a case study?* The question hides the assumption that generalisation is based on **statistical inference**, from a sample to a population.

- But: qualitative research questions that assumption!
  - A two-step process: (1) show how a case study findings bear upon a particular theory, and (2) apply the same theory to implicate other, **similar situations** where analogous events might occur.

- Lee & Baskerville (2003): generalising from case studies in Information Systems research

Any questions on case studies? :-)

Action research

- “Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework” (Rapoport, 1970, in Myers, 1997: 6)

- Action research: operates the concomitant processes of taking **action** on a certain object, and doing **research** on it.

- Two core assumptions of action research:
  - Social settings cannot be reduced for study,
  - Action brings understanding.

Action research in Information Systems

Numerous works (from HISP UiO especially) illustrating the value of action research in the Information Systems context!

Some examples:

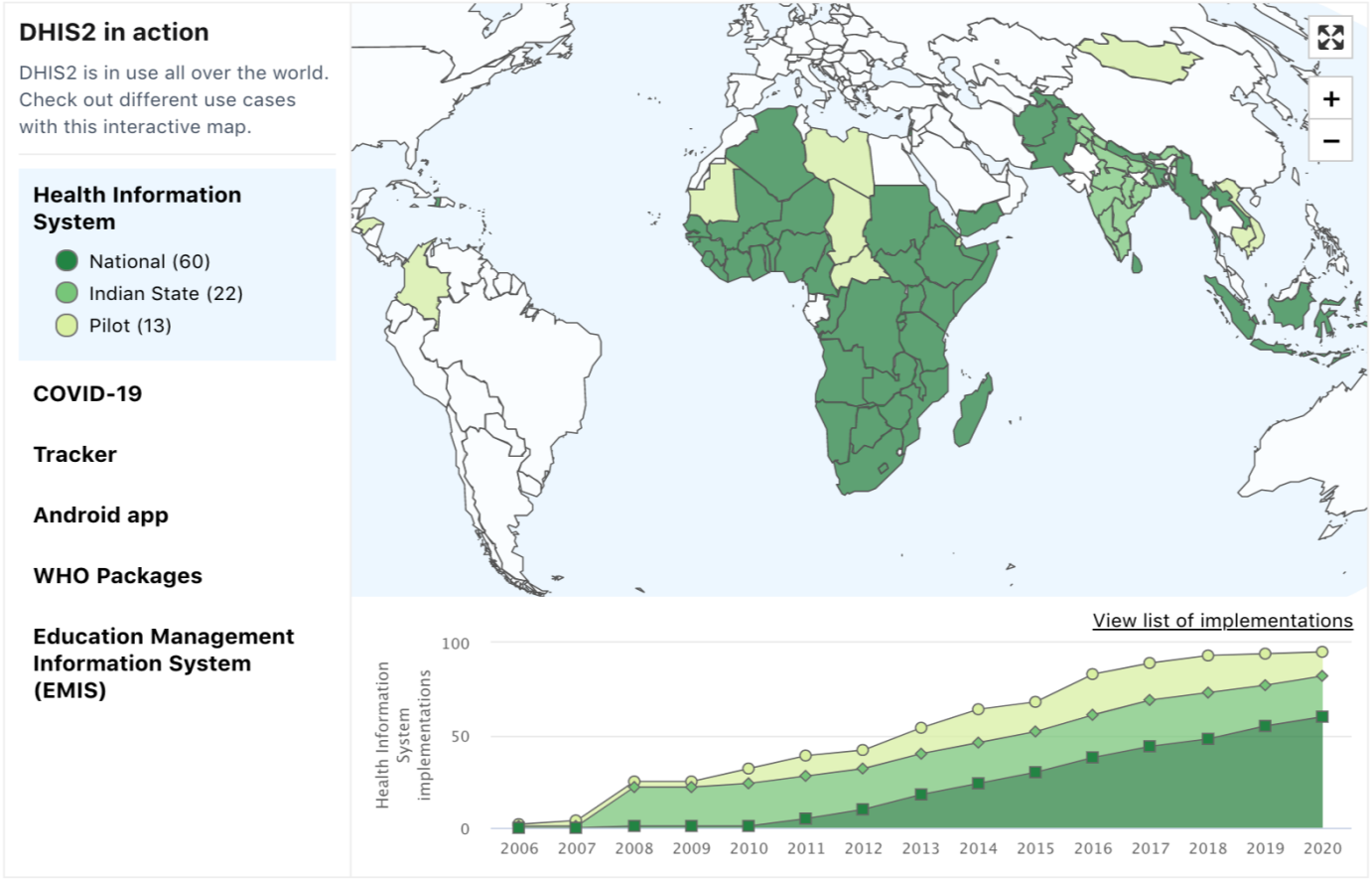
- Braa, Monteiro & Sahay (2004) – presents action research interventions as one element in a larger **network of action** to ensure sustainability of the intervention

- Braa & Sahay (2012) – discuss the method of **participatory design**, noting its consequences on design, development, implementation and scaling of a digital platform (DHIS2) across the health systems of various developing countries

Health Information Systems Programme - DHIS2

- HISP a global **action research network** initiated in collaboration with University of Oslo and University of Western Cape in1994 funded by Norad.
- DHIS2 is an open source software for reporting, analysis and dissemination of data for **all** health programs
- Shared and integrated data warehouse for essential health data: **information for action**
- **Aggregate, events,** and **patient** data
- **Generic and generative platform** - supports a wide range of uses also beyond the health sector
- Financed and endorsed by all Global Health agencies, WHO, Norad, Global Fund, PEPFAR Unicef, Gates Foundation, GAVI, CDC
- WHO collaborative center
- DHIS2 used by MoH in 73 countries in the Global South

DHIS2 adoption around the world (MoH implementations)



Supported as a **Global Public Good**

Open source, entirely free of licensing fees

Generic- supporting all use cases

Global footprint: used by 73 countries

Scalability: national scale in 60 countries

In-country **ownership**

Community-driven software roadmap

Read more on dhis2.org/in-action and facebook.com/dhis2

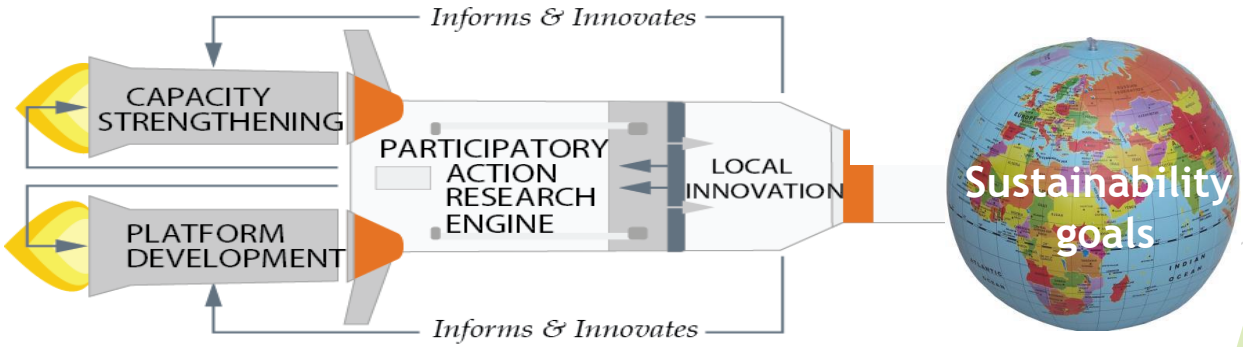
Global «footprint»
2.4 billion people

+ 60 NGO's, 58 PEPFAR countries, 60+ PSI countries, 10 global organizations

Action research on DHIS2: Capacity building through local innovation

- Strengthening national health information systems
  - Collaborating with Ministries of Health
  - Participatory design (Scandinavian tradition) -> creating ownership
- Action Research: Building knowledge on implementing HIS while building systems on the ground through partnerships.
- HISP PhD school at University of Oslo: 65 PhDs graduated, 25 active

- International Masters programs in South Africa, Mozambique, Malawi, Tanzania, Ethiopia, Sri Lanka (400 graduated)
- Regional DHIS 2 Academies, 125 Academies since 2011, 5700 graduated
- Online Academy: Fundamentals 10500 enrolled, PEPFAR, In country Data Use



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Et norsk bistandsprosjekt skal nå gjøre virusjakten langt mer effektiv også her hjemme. Prisen: Nærmest gratis.

Recent HISP Master thesis work…

Action Design Research (participatory App development)

- Jonas Berg Henie: Developing for usability and user involvement in a low resource contex (2018)
- Fraschetti, Yrjan Aleksander Frøyland and Roa, Julie Hill. Designing mobile instant messaging for collaborative health data management in Rwanda (2017)

Exploratory Case Studies (based on participatory observation)

- Parramore, Anastasia: Computer supported evidence-based decision-making at health facilities in Zambia (2017)
- Ommundsen, Simon Oliver, Designing an Education Management Information System - A case study on the introduction of a digital, mobile-to-web Education Management Information System in Zambia (2017)

So…

- Case study research is centred on understanding the **meaning** people assign to phenomena.
- Action research takes the understanding of context as the basis to take action on it, enacting positive **change**.
- While different in nature the two approaches are interlinked, to the point that case study researchers may embrace action research through their journey (and here is one who did!)

To recap…

- Today we have introduced **qualitative research** as a route to answering research questions and making scientific contributions through qualitative methodologies

- We have identified three main **epistemologies** (positivist, interpretive, critical) informing research, along with the assumptions that characterise them

- We have then reviewed two **methodologies** – case studies and action research - to conduct qualitative research, which will equip you to critically assess the research you read – and start thinking of ways to structure your own research!

THANK YOU!

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