

TVET Teacher Continuing Professional Development in Kenya: A Mixed Methods Research into Current Practices

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Introduction

- We are living in a fast paced world where technology and modes of work change rapidly,
- Education, and in particular Technical and Vocational Education (TVET), is necessary for social economic development.
- The quality and relevance of Technical and Vocational Education and Training (TVET) is heavily reliant on the up to datedness of the competencies of TVET teachers.
- This requires TVET teachers to participate in effective Continuous Professional Development (CPD).
- The Corona Pandemic has however radically altered learning and teaching across the world.
- In Kenya's TVET institutions, TVET teachers must learn and adopt new teaching methodologies.
- The Corona Pandemic has thus demand more effective Teacher CPD while creating new challenges for its provision.
- It is therefore necessary to develop a new policy framework to guide, stimulate and sustain effective TVET teacher CPD in Kenya.
- But the development of such a policy framework requires an understanding of current CPD practices by TVET teachers.
- Developing that understanding however requires the use of an appropriate research methodology.

Aim

- Present and discuss a proposed research design to investigate current CPD practices by TVET teachers in Kenya.
- Discuss the general implementation of the survey method using both quantitative and qualitative methods
- Show that there is no epistemic difference between the quantitative and qualitative research methods.

Methodology

- Through an extensive review of literature on research methodologies, provide a philosophical justification for the survey method rooted in critical realism.

Paradigms or theoretical perspectives

- A researcher's conception of reality and knowledge, and the resultant conception of how best to study an aspect of reality in order to obtain valid knowledge about it.
- A combination a held ontology and epistemology.
- Together these conceptions guide data collection, data analysis and its interpretation, i.e., adopted research methods.

Choice of Approach

- Outcome of a researcher's:
 - **Ontology:**
 - conception of the nature of reality; what problems can be studied
 - **Epistemology:**
 - conceptions of what knowledge is and how it can be obtained
 - **Methodology:**
 - rationale guiding the choice of data collection and analysis methods/techniques
 - **Resources available to the researcher**
 - Physical, time etc.
 - **Axiology:**
 - Ethical position

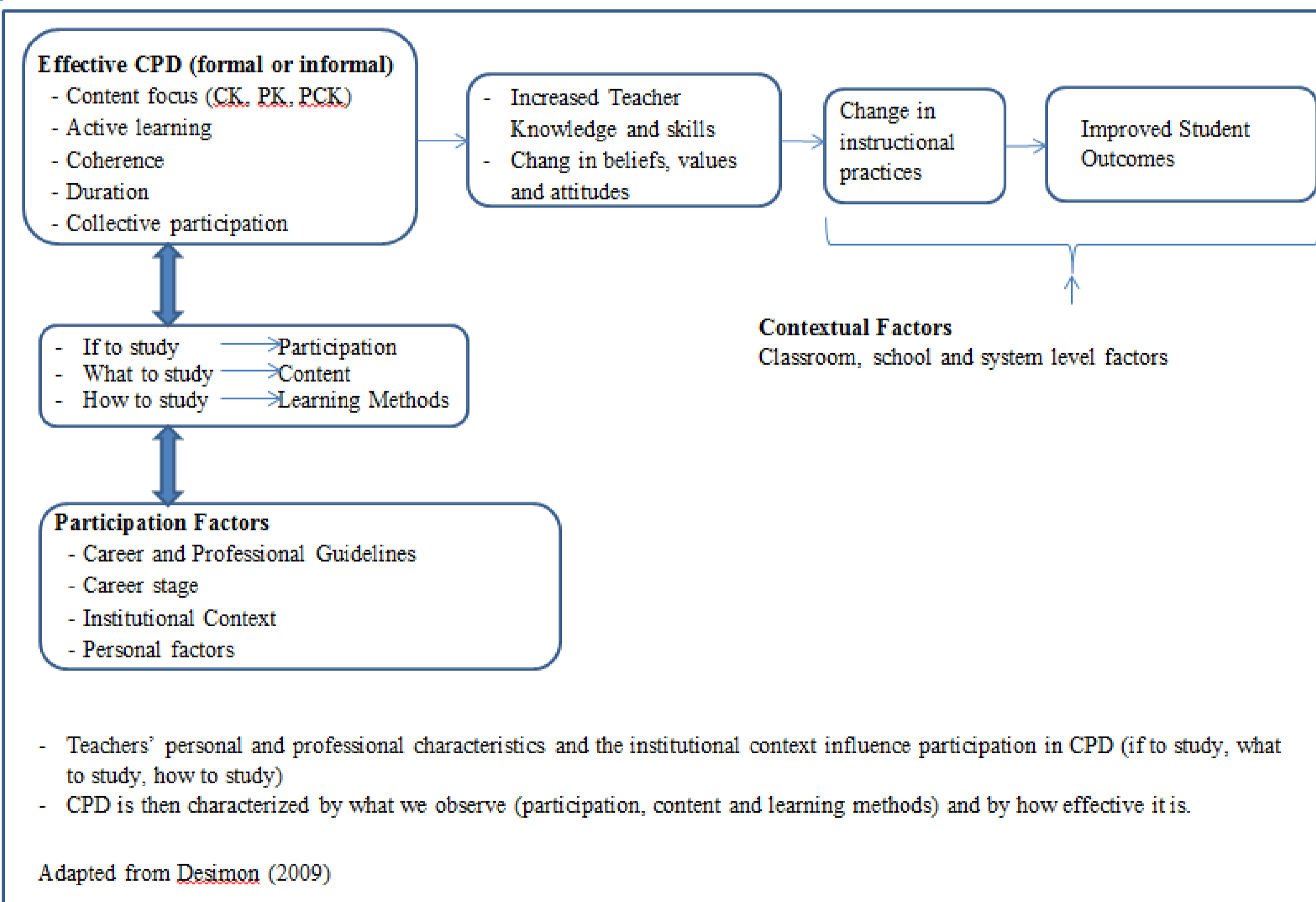
Methods for studying the social world

- To study the social world is to study people.
 - Collect information about the social world, analyse it and explain observations
- Many ways to collect information and analyse the information. E.g. participant and non-participant observations, qualitative and quantitative analysis
- Request people to provide data about themselves and then analyse and interpret that data.
 - Interviews and surveys are two of the most common methods of collecting data about people.

Epistemic Similarity of Qualitative and Quantitative Methods

- Both approaches have a similar aim of describing social reality and establishing how society works.
- Both approaches are complementary techniques addressing the same set of issues (to explore and confirm observations and their explanations).
- Differences are technical (choice of method) but not epistemic (underlying view of what knowledge is).

Figure 1: Theoretical Framework



Justification for the Mixed Methods Approach

Enable and integrated description and interpretation of observed CPD practice by TVET teachers in Kenya.

- Corroborate speculations from the survey (e.g., teachers specifically state this as reasons or negate them)
- Test hypothesis developed from analysis of interview data (e.g., do teachers with a particular characteristic do something that others do not, does that characteristic explain something observed?)
- Enable a broad description that the interview cannot
- Enable identification of emergent codes and characterizations that have not been captured previously in literature. e.g. questionnaire development relies on prior data, known practices, motives, challenges etc., what else exists that has not been captured in literature?
- Some aspects may be more easily explained orally, rather than responded to in an questionnaire, e.g., how do enable description of interactions and perceptions about others and how these shape practices,
- Interviews answer to an ethical need of giving teachers a voice while investigating their world

What is TVET?

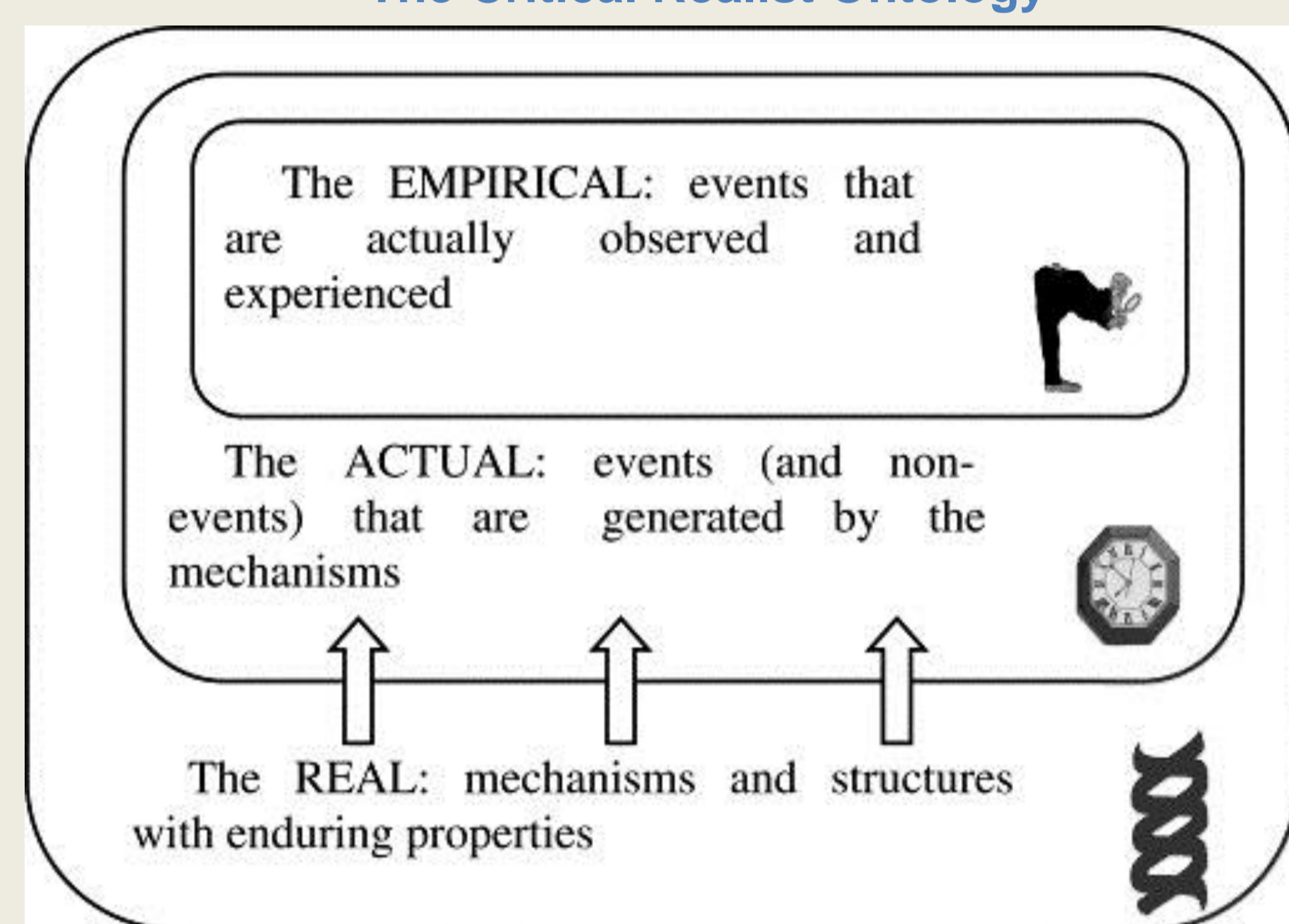
- Educational processes that enable the learning and mastery of technique. (Njenga, 2020)
- Vital source of skilled labour



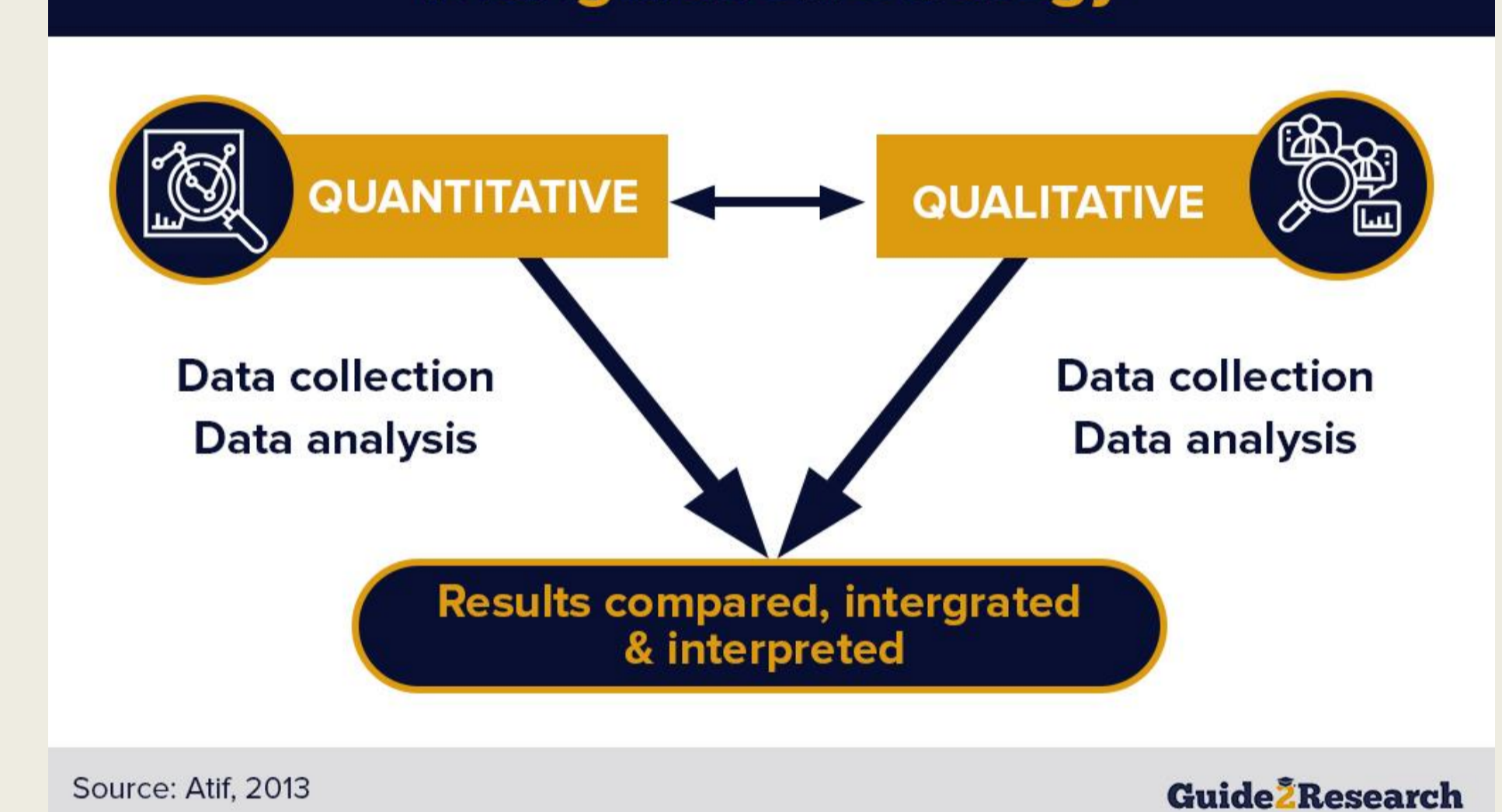
What is CPD?

- On-going improvement of a professionals knowledge, skills and attitudes.

The Critical Realist Ontology



The Mixed Methods Concurrent Triangulation Strategy



Research Design for the Study

Questionnaire Survey: Broad description of practices and the teacher characteristics that correlate with those practices.

- Identify which teachers are more likely to participate, what content they are likely to learn, and the learning methods they use.
- Identify their motives, benefits obtained and challenges faced.

Interviews: What teachers think about teaching and teacher learning.

- Identify what teachers think CPD is and its value to them.
- Contrast teacher expectations for their CPD against their actual outcomes. The contrast is expected identify the frustrations teachers face and how these shapes their resultant practices.

Integrated analysis and interpretation of findings

- Description of the current TVET teacher continuing professional development practices.
- Meanings teachers hold about teaching and teacher learning and how the held meanings influence teacher leaning.
- Proposed policy framework that can stimulate and sustain effective continuing professional development for TVET teacher in Kenya.

Selection of Survey Participants

- Study location: Kenya's Nairobi Metropolitan Area
 - Large and diverse population that is representative of the country
 - Three interview participants from five institutes
 - Selection of Questionnaire participants:

County	Number of VTCs	Number Selected	Number of Teachers in each TTI	Number of Teachers Sampled
Kajiado County	2	1	100	43
Kiambu County	2	1	150	50
Machakos County	3	1	200	54
Murang'a County	3	1	200	54
Nairobi County	25	2	300	59
Total	35	6	950	160

Formula used to set sample size: Cochran's sample size equation modified for finite populations

End