Core Template - 3

T-NPI-Compare (Cross-Domain Inference)

Generalisation through Repeated Observation: Comparative Methodology

The T-NPI-Compare template addresses one of the most persistent challenges in qualitative research: the justification of generalisation. While case studies provide rich and context-sensitive insights, their findings are often criticised for limited transferability. Comparative methodologies attempt to address this issue, yet they frequently lack a clear inferential structure linking individual cases to broader claims. The T-NPI-Compare template resolves this problem by formalising generalisation through the Nyāya concept of *vyāpti*, grounded in repeated observation (*bhūyo-darśana*).

The methodological progression begins with the *selection of exemplars across multiple domains,* ensuring variation in context while maintaining relevance to the phenomenon under study. This corresponds to comparative research designs that seek to identify patterns across diverse settings. The emphasis is on constructing a dataset that enables meaningful comparison rather than statistical representation.

The second phase involves *standardised analytical coding (C–H–S)*, ensuring that cases are rendered comparable through a common framework. This step addresses a key limitation in qualitative research, where lack of standardisation often hinders cross-case analysis. By structuring data in terms of conditions, indicators, and outcomes, T-NPI creates a basis for systematic comparison.

The third phase is the construction of a *cross-domain matrix*, where patterns are examined across cases. This corresponds to pattern matching and comparative analysis, but is distinguished by its orientation toward inferential reasoning. The objective is not merely to identify similarities but to detect recurring configurations that suggest underlying causal relations.

The fourth phase involves the *formulation of vyāpti*, where a generalisable relation is articulated. This step aligns with the development of middle-range theory, which seeks to balance empirical grounding with theoretical abstraction. The emphasis on repeated observation ensures that the inferred relation is robust across contexts.

The fifth phase consists of *upādhi detection*, where potential limiting conditions are identified. This step is crucial for ensuring that generalisation is not overstated. In modern methodological terms, it corresponds to the identification of confounding variables and contextual moderators.

The final phase involves *robustness testing through Tantrayukti lenses*, where the inferred relation is examined across additional contexts and through analogical reasoning (*upamāna*). This ensures that the relation possesses external validity and can be meaningfully applied beyond the original cases.

Through this progression, T-NPI-Compare provides a systematic framework for generalisation that avoids both positivist reductionism and interpretive relativism. It demonstrates that generalisation can be achieved through structured inference grounded in repeated observation, thereby bridging the gap between context-sensitive analysis and broader theoretical claims.

Methodological Phases with Empirical Demonstration

Phase 1: Multi-Domain Selection

Using World Bank datasets:

- Education (learning outcomes dashboards)
- Governance (service delivery indicators)
- Training systems (teacher development programs)

Phase 2: Standardised Coding

Across domains:

- Conditions: institutional capacity, training, governance
- Indicators: performance metrics, participation rates
- Outcomes: system efficiency, learning outcomes

Phase 3: Cross-Domain Matrix

Repeated observations:

Domain	Condition	Outcome
Education	Teacher training + assessment	Learning improvement
Governance	Decentralisation	Service delivery efficiency
Training	Structured programs	Skill improvement

Phase 4: Vyāpti Discovery

Where institutional capacity, structured training, and governance alignment exist, system performance improves.

Phase 5: Upādhi Detection

Limitations observed:

- Weak institutional capacity
- Data gaps
- Resource constraints

These correspond to *confounders in causal inference* (Mahoney, 2000).

Phase 6: Robustness Testing

Cross-country datasets and multiple programs confirm the relation, supporting *external validity* (Lincoln & Guba, 1985).

10.3 Methodological Insight

T-NPI-Compare enables:

Generalisation without statistical reductionism through structured inferential repetition.

References

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