TOP 2025: A Policy Framework for Enhancing Verifiability of Research Claims

Katie Corker – February 27, 2025

ASAPbio

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Transparency and Openness (TOP) Guidelines - TOP 2015

Citation Standards Describes citation of data	**Data Transparency** Describes availability and sharing of data
Analytical Methods Transparency Describes analytical code accessibility	**Research Materials Transparency** Describes research materials accessibility
Design and Analysis Transparency Sets standards for research design disclosures	**Preregistration of Studies** Specification of study details before data collection
Preregistration of Analysis Plans Specification of analytical details before data collection	**Replication** Encourages publication of replication studies

1 DISCLOSURE: the final research output must disclose if the work satisfies the standard

2 REQUIREMENT: the final research output must satisfy the standard

3 VERIFICATION: third party must verify that the standard is being met

Factors Motivating TOP 2025 Changes

- Inconsistent levels across standards
- Dependencies across standards
- Lack of applicability for some practices to some methods
- Poor reliability of scoring suggesting lack of clarity for some standards

Three Major Classes of Revisions

1. Revisions to research practices
2. Consistent levels for research practices
    - Disclose, Share and Cite, Certify
3. Reorganized structure for TOP with three categories of standards
    - Research practices, verification practices, verification studies

Revisions to Research Practices, Consistent Levels

Research Practices

1	2	3
DISCLOSE	SHARE & CITE	CERTIFY
Study Registration		
Study Protocol		
Analysis Plan		
Materials Transparency		
Data Transparency		
Analytic Code Transparency		
Reporting Transparency		

Research Practices

Three Levels of Stringency

1

DISCLOSE

Researchers must state whether or not a practice was done and, if so, its location.

2

SHARE & CITE

Researchers must share the output and cite its location in a trusted repository.

3

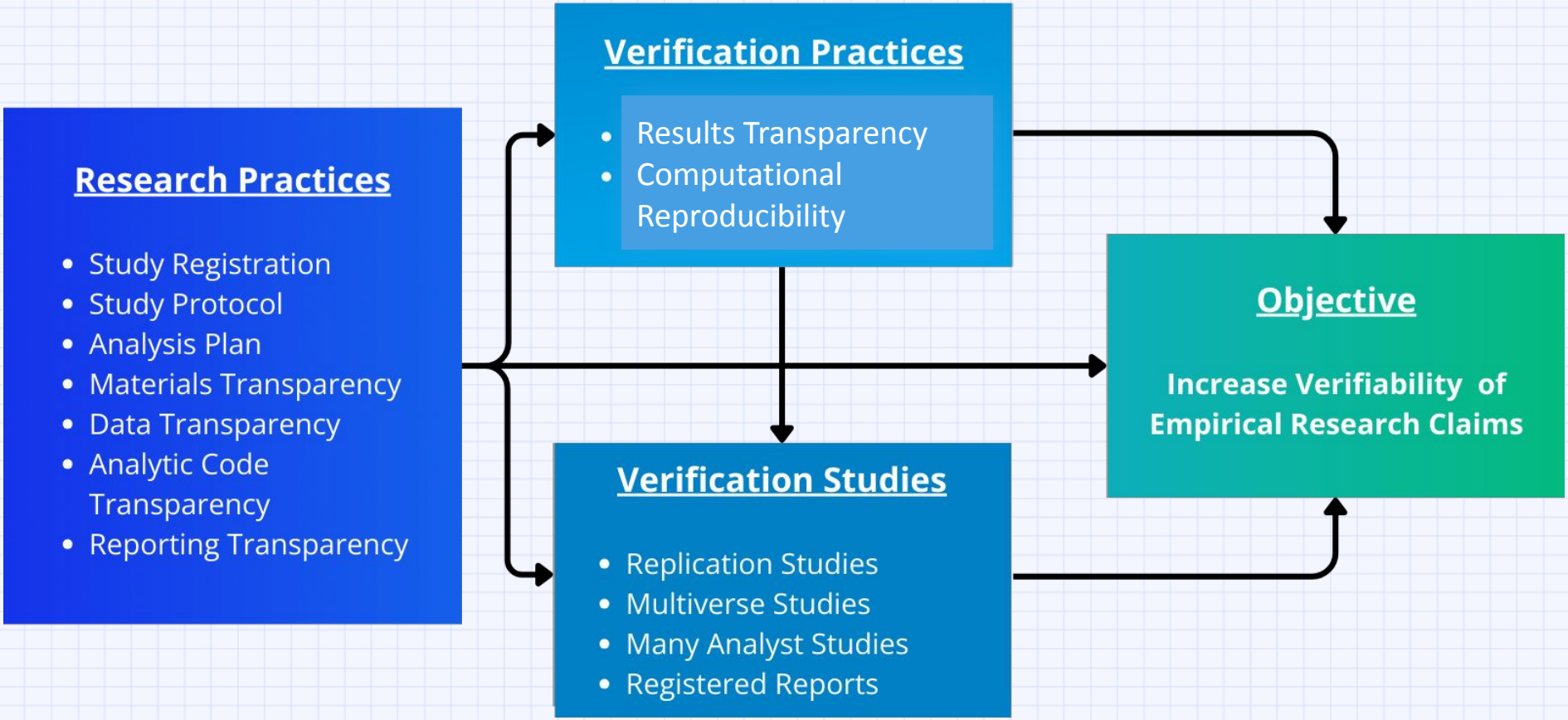
CERTIFY

Independent party certifies that a practice is done to disciplinary best practice standards.

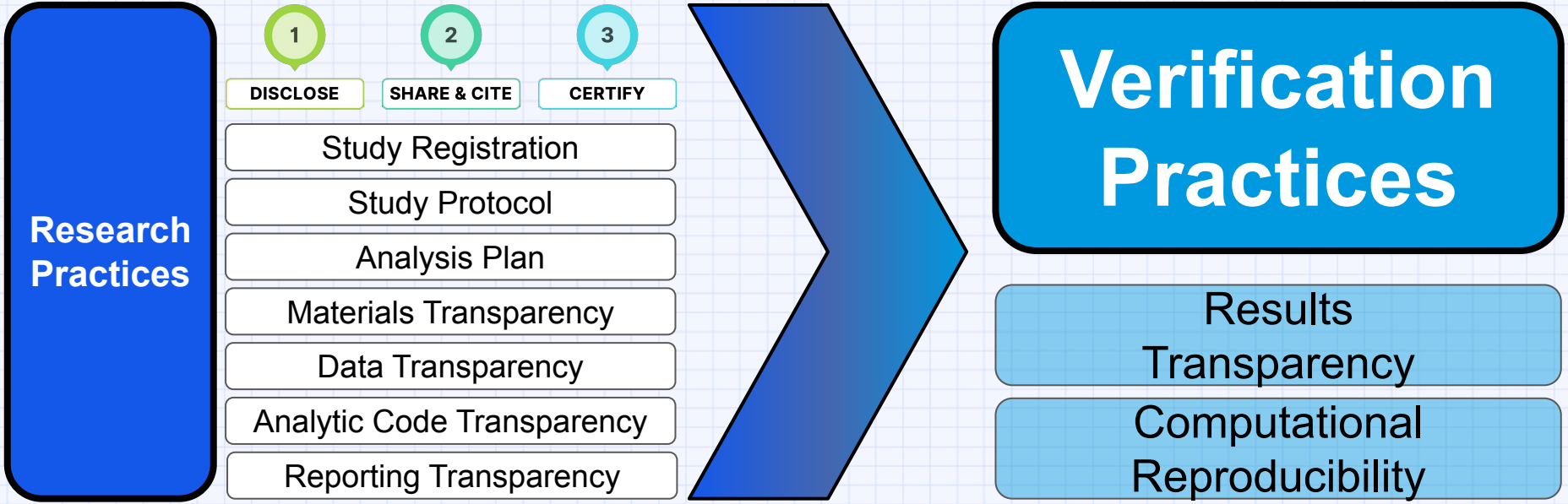
Research Practices

1	2	3
DISCLOSE	SHARE & CITE	CERTIFY
Study Registration		
Study Protocol		
Analysis Plan		
Materials Transparency		
Data Transparency		
Analytic Code Transparency		
Reporting Transparency		

A Reorganized Structure for TOP


Research Practices
Study Registration
Study Protocol
Analysis Plan
Materials Transparency
Data Transparency
Analytic Code Transparency
Reporting Transparency
Verification Practices
Results Transparency
Computational Reproducibility
Verification Studies
Replication Studies
Multiverse Studies
Many Analyst Studies
Registered Reports
Objective
Increase Verifiability of Empirical Research Claims

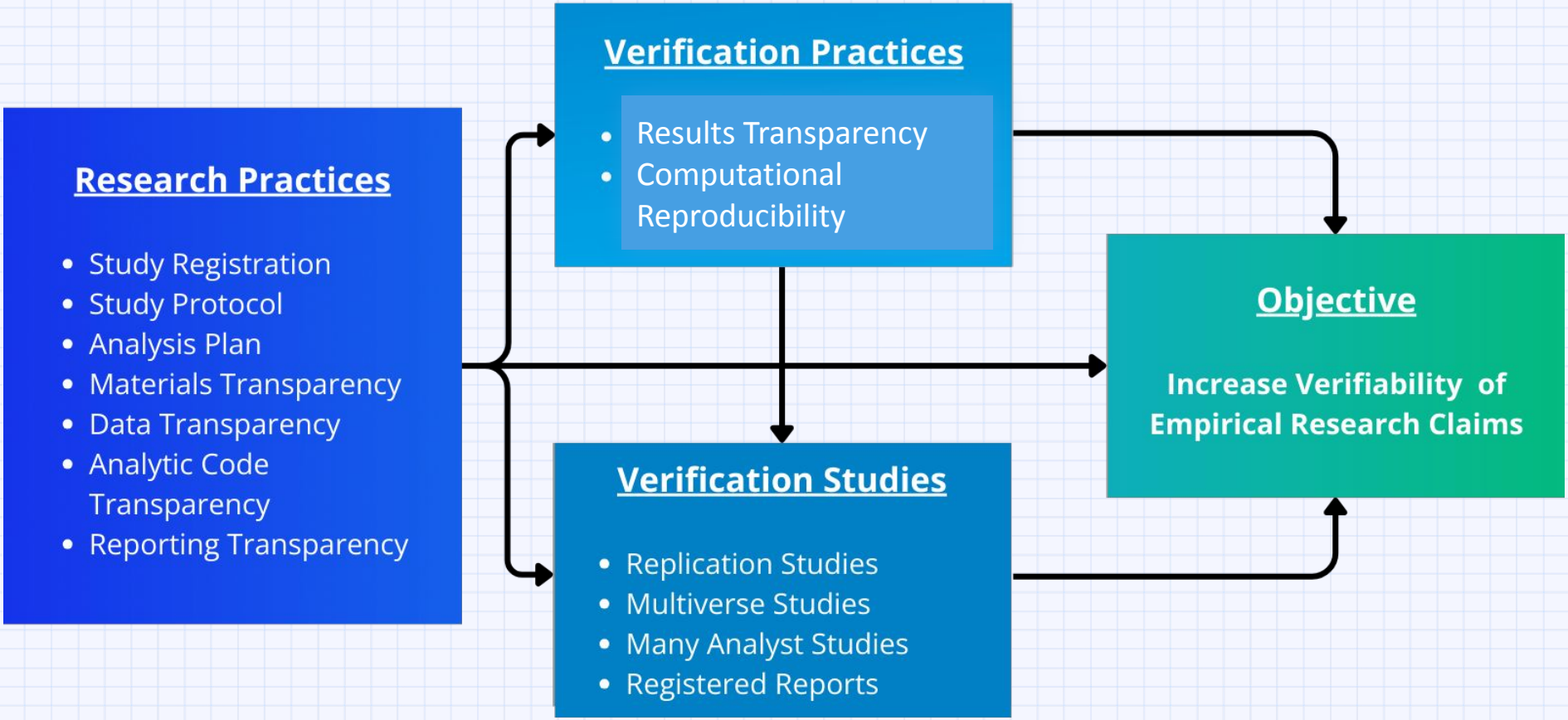
A Combination of Research Practices Undergird Verification Practices



Study Designs, Publication Formats that Focus on Verification

Verification Studies

- Replication
- Registered Report
- Multiverse
- Many Analyst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Thank You

Slides: https://osf.io/p82tu

Preprint: https://osf.io/nmfs6

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Read more and give feedback on changes →

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