



## Strengthening Research Capability Assessment for Teacher Educators



S&T in Education

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### Key Findings and Policy Implications

- The Research Capability Test (RCT) showed strong internal consistency, making it a dependable tool for assessing research competencies.
- The test demonstrated a desirable difficulty index (50.76%), good discrimination index (0.28), and high distractor efficiency (78.97%).
- The study confirmed a strong association between distractor efficiency and item difficulty, ensuring the effectiveness of the test items.
- The RCT items were tailored to teacher education contexts and used gender-fair language, making the test equitable and inclusive.
- The validated RCT provides higher education institutions with an objective tool to measure faculty members' research skills, essential for accreditation, professional development, and institutional research performance.
- Institutions can integrate the RCT into faculty training programs and graduate school admission requirements to ensure a strong research culture.
- TEIs and DepEd can adopt the RCT as a national benchmark for assessing and improving the

research skills of teacher educators, ensuring alignment with international academic standards.

## Background

Research capability is essential in higher education institutions, particularly for faculty members who contribute to evidence-based teaching, policy development, and institutional growth. However, a significant gap exists in assessing the research capabilities of educators. The Commission on Higher Education (CHED) has identified research development as a priority, highlighting the need for reliable assessment tools. The Research Capability Test (RCT) was developed to address this gap, ensuring an objective measure of educators' competencies in conceptualizing, conducting, and publishing research.

## Research Objectives

- Design and construct a Research Capability Test (RCT) for educators that is gender-sensitive, criterion-referenced, and contextualized.
- Determine the difficulty, discrimination, and distractor indices of the test to ensure its effectiveness.
- Analyze relationships among test indices to refine the instrument for accurate assessment.
- Establish the reliability and validity of the RCT to confirm its suitability as a standardized tool.

## Methodology

### Research Design

Quantitative approach focusing on test validation.

### Participants

Teacher-educators from public higher education institutions in the Cagayan Valley Region, selected through purposive sampling.

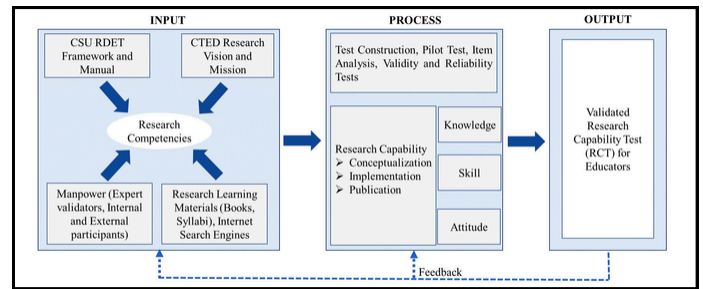
### Instrument Development

A 120-item pilot test underwent expert validation, statistical item analysis, and two rounds of pilot testing.

### Data Analysis

Difficulty index, discrimination index, and distractor

efficiency were computed. The final version of the RCT consisted of 80 validated items, demonstrating high reliability ( $\alpha = 0.904$ ).



**Figure 1.** A paradigm showing the Input-Process-Output model of the study.

## Key Findings

### Psychometric Soundness

The final 80-item RCT achieved a mean difficulty index of 50.76 (desirable range) and a mean discrimination index of 0.28 (reasonably good).

### Distractor Efficiency

The test showed a mean distractor efficiency of 78.97%, indicating that the multiple-choice options effectively attracted less-prepared examinees, thereby reducing the role of guessing.

### Reliability and Validity

With a Cronbach's alpha of 0.904, the RCT is highly reliable. The content validity index (S-CVI) of 0.956 confirms that the items are highly relevant to the required research competencies

### Contextualization

The RCT successfully integrated gender-neutral language and real-world educational contexts (e.g., Emergency Remote Teaching during COVID-19), enhancing its relevance to educators.

## Conclusion

The Research Capability Test (RCT) is a validated and reliable assessment tool designed to objectively measure teacher educators' research competencies. Its implementation can enhance research culture, improve faculty research skills, and support institutional accreditation efforts. Adoption at institutional and national levels will ensure a more research-driven, globally competitive higher education system.

## Policy Recommendations

### Institutional Adoption

Higher education institutions may use the RCT to assess faculty members' research competencies and design professional development programs based on identified weaknesses.

### Graduate School Integration

The RCT can serve as an admission requirement or diagnostic tool for graduate students to ensure they possess the necessary research skills before undertaking thesis work.

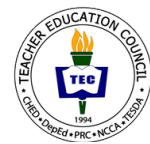
### National-Level Implementation

CHED and DepEd may consider scaling up the RCT's application nationwide, using it as a benchmark for research training and faculty evaluation.

### Further Validation

The test may be validated in a broader sample of institutions to enhance generalizability and allow for norm-referenced interpretations.

## Target Policy Actors and Beneficiaries



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The utilization and administration of the Research Capability Test shall officially commence only upon the signing of a Memorandum of Agreement (MOA) between Cagayan State University and its partner Teacher Education Institutions (TEIs). No part of this assessment tool shall be administered, distributed, or reproduced for implementation purposes without a duly executed MOA.

## Editor's Note

This policy brief is based on results of the CSU-funded project "Research Capability of Teacher Education Faculty of Cagayan State University". This project was implemented by the Cagayan State University - Andrews Campus. The CSU - Andrews Campus project team is composed of Jay-Cen Tamayo Amanonce, Rudolf Tamangen Vecaldo, Maribel Fontiveros Malana, Conchita Malenab Temporal, Antonio Ingaran Tamayao, Jhoanna Battung Calubaquib, Marie Claudette Maramag Calanoga, Ria Arellano Tamayo.

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