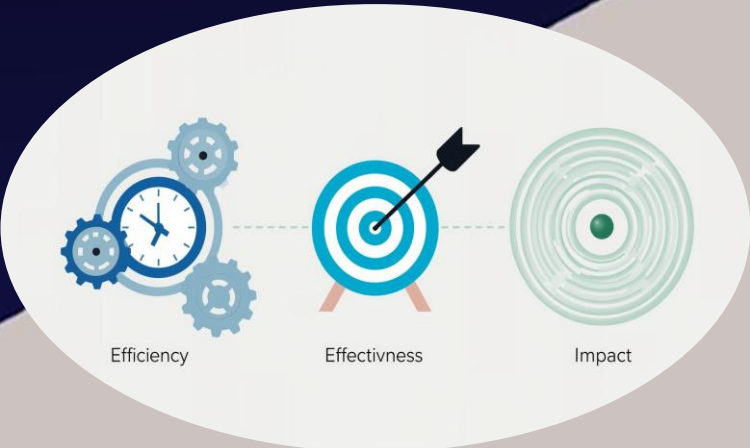


# Research teachers: Evaluation of research quality from the perspective of efficiency, efficacy and effectiveness

Jossarys Gazo Robles

Research Professor at the National Autonomous University of Nicaragua, Managua  
<https://orcid.org/0000-0002-0989-4827>

## Comprehensive evaluation of research quality



Research Quality Triangle:  
**Efficiency**

- Optimal use of resources (time, money, talent).
- Was the result achieved at the lowest cost and in the least time?

**Efficacy**

Fulfillment of research goals.  
Were the expected results achieved?

**Effectiveness**

- Combination of efficiency + efficacy.
- Was a real and relevant impact generated?

## Key measurement indicators

Dimension	Concrete indicators
Efficiency	<ul style="list-style-type: none"><li>▪ Years of service vs. Productivity.</li><li>▪ Cost per project/article.</li><li>▪ Salary-results ratio.</li></ul>
Efficacy	<ul style="list-style-type: none"><li>▪ Journal Impact Factor.</li><li>▪ Collaboration Index.</li><li>▪ Presence in Scopus, WoS, Google Scholar.</li></ul>
Effectiveness	<ul style="list-style-type: none"><li>▪ Social impact.</li><li>▪ Research relevance.</li><li>▪ Contribution to disciplinary development.</li></ul>



*The teacher-researcher:  
Knowledge builder*



Impact Circle:

- **Generates knowledge** from research experience.
- **Authoritatively guides** students' scientific learning.
- **Links theory and practice** in real-world contexts.
- **Contributes to solving social** and technological problems.

## Strategies for strengthening a research culture

To increase the number of competent teacher-researchers:

- **Clarify research lines** for teachers.
- **Continuous updating** on emerging topics.
- **Participation** in national and international academic networks.
- **Institutional dialogue spaces** to optimize resources.



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