

DOES IT MATTER IF MY PAPER DOESN'T HAVE A THEORETICAL FRAMEWORK?

- It depends on the field of study
 - For theoretical research field (psychology, sociology, etc) → it is critical
 - For applied field (engineering, computer science, etc) → less critical if the focus is on solving problems or creating technical solution
- It depends on research objectives
 - If explores relationship → It is often essential (to explain why relationships exist between variables)
 - If it is descriptive research → it is probably not strictly required

WHAT IS A THEORETICAL FRAMEWORK?

- A structure that is grounded in established theories, models, or concepts used to guide and support a research.
- It provides the lens through which the research questions are viewed and investigated.
- It connects the research questions to:
 - Relevant theories that provide an explanatory foundation.
 - Prior research findings that contextualise the study.
- It identifies:
 - What is being studied
 - Why it is being studied
 - How the study is approached

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EDITORIAL.

What Is A Theoretical Framework? A Practical Answer

Norman G. Lederman¹ · Judith S. Lederman¹

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Other than the poor or non-existent validity and/or reliability of data collection measures, the lack of a theoretical framework is the most frequently cited reason for our editorial decision not to publish a manuscript in the Journal of Science Teacher Education. A poor or missing theoretical framework is similarly a critical problem for manuscripts submitted to other journals for which Norman or Judith have either served as Editor or been on the Editorial Board. Often the problem is that an author fails to justify his/her research effort with a theoretical framework. However, there is another level to the problem. Many individuals have a rather narrow conception of what constitutes a theoretical framework or that it is somehow distinct from a conceptual framework. The distinction on lack thereof is a story for another day. The following story may remind you of an experience you or one of your classmates have had.

Doctoral students live in fear of hearing these now famous words from their thesis advisor: "This sounds like a promising study, but what is your theoretical framework?" These words instantly send the harried doctoral student to the library (giving away our ages) in search of a theory to support the proposed research and to satisfy his/her advisor. The search is often unsuccessful because of the student's misconception of what constitutes a "theoretical framework." The framework may actually be a theory, but not necessarily. This is especially true for theory driven research (typically quantitative) that is attempting to test the validity of existing theory. However, this narrow definition of a theoretical framework is commonly not aligned with qualitative research paradigms that are attempting to develop theory, for example, grounded theory, or research falling into the categories of description



Chicago, IL, USA

KEY ELEMENTS OF A THEORETICAL FRAMEWORK

- Foundation: Rooted in existing theories, it offers explanations or predictions for the phenomena under investigation.
- **Scope:** It defines the boundaries of the research, clarifying what is included or excluded.
- **Guidance:** It informs the research design, helping select methods, variables, and interpretations.
- Integration: It ties together existing knowledge, highlighting gaps and how the study aims to address

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EXAMPLE: TRANSFORMATIONAL LEADERSHIP THEORY

Aspect	Focus
Foundation	 Draws from foundational works of Burns (1978) and Bass (1985). Incorporates multi-level analysis of leadership (individual, dyadic, group).
Scope	 Explores how transformational leadership behaviours operate across levels. Emphasises boundary conditions, such as moderators at different levels of analysis.
Guidance	 Provides hypotheses regarding the relationship between transformational leadership behaviours and follower outcomes. Discusses moderators and methods to assess them.
Integration	 Links transformational leadership to motivation theories and emphasises multi-level approaches. Highlights gaps in the literature, such as limited research on multi-level effects.

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TRANSFORMATIONAL LEADERSHIP THEORY: USING LEVELS OF ANALYSIS TO DETERMINE BOUNDARY CONDITIONS

FRANCIS J. YAMMARINO
Center for Leadership Studies and School of Management
State University of New York at Binghamton

ALAN J. DUBINSKY College of Management Metropolitan State University

The purpose of this study was to refine understanding of transformational leadership theory by a specification and test of boundary conditions. Multiple levels of analysis (individual, dyad, and group) were used to identify conceptually and assess empirically the potential bounds on transformational leadership theory. Multi-source data were collected from a sample of 105 salespersons and their 33 sales supervisors, and within and between analysis (WABA) procedures were conducted. Contrary to higher-level (dyad, group) and cross-level assertions in the literature, transformational leadership results were based solely on individual differences. That is, in this sales setting, transformational leadership theory was determined to be an individual-level theory bounded by individuals' (superiors' and subordinates') perceptions and not holding at higher levels of analysis. Implications of the findings for future leadership research and practice are discussed.

Well-formulated theoretical models include not only variables and relationships among the variables, but also the boundaries or domains within which the theory is expected to hold (see Dubin, 1976). Some leadership scholars seem to view transformational/charismatic leadership theory as an unbounded theory (see Bass, 1990). Bass (1985, 1990), Bass and Avolio (1990, 1993), and their associates (see Bass & Avolio, 1994), for example, have discussed the "universality" of transformational leadership theory. Included in these discussions are (a) the relevance of the theory for numerous fields of study and various historical periods and events; (b) the theory's applications to and implications for different levels of analysis and levels of management; (c) the meaning

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Correspondence and requests for reprints should be addressed to Francis J. Yammarino, Center for Leadership Studies, School of Management, State University of New York at Binghamton, PO Box 6000, Binghamton, NY 13902-6000.

TRANSFORMATIONAL LEADERSHIP THEORY

Question	Transformational Leadership Theory
What is studied?	 The impact of transformational leadership behaviours (Idealised Influence, Inspirational Motivation, Intellectual Stimulation, Individualised Consideration) on employee outcomes such as engagement and performance.
Why is it studied?	 Leadership behaviours are critical for improving organisational outcomes. Previous studies have overlooked how these behaviours operate at multiple levels (individual, dyadic, group).
How is it approached?	 Research Design: Quantitative survey-based study. Hypotheses: "Transformational leadership positively affects employee engagement." Measurement Tools: Multifactor Leadership Questionnaire (MLQ). Analysis Techniques: Structural Equation Modelling (SEM).

INTEGRATING THEORY INTO INTRODUCTION

- Introduction The Create A Research Space Model
- Move 1 Establish a territory
 - ➤ Step 1 Claiming centrality and/or
 - > Step 2 Making topic generalisation(s) and/or
 - > Step 3 Reviewing items of previous research
- Move 2 Establishing a niche
 - ➤ Step 1(A) Counter-claiming or
 - ➤ Step 1(B) Indicating a gap or
 - ightharpoonup Step 1(C) Question-raising or
 - ➤ Step 1(D) Continuing a tradition
- Move 3 Occupying the niche
 - ➤ Step 1(A) Outlining purposes or
 - > Step 1(B) Announcing present research
 - ➤ Step 2 Announcing principal findings
 - > Step 3 Indicating research article structure

- Move 1: Establish a territory → Highlight the importance of the research area and connect it to the broader academic landscape.
 - How to integrate: Mention the theoretical framework as part of the foundation of understanding the research area. So, you can use the framework to explain why this area is significant.
 - An example: <u>Transformational Leadership Theory has been</u> <u>extensively studied as a lens for understanding leadership</u> <u>effectiveness across various contexts (Burns, 1978; Bass, 1985).</u>
- Move 2: Establishing a niche → Identify gaps, inconsistencies, or unexplored areas in the literature
 - How to integrate: Use the theoretical framework to highlight gaps or limitations in existing applications, and justifies the focus of the study.
 - An example: "While Transformational Leadership Theory has been validated in large organisations, its application at the group level within SMEs remains underexplored, particularly regarding employee engagement in hybrid work environments."

- Move 3: Occupying the niche

 State the study's objectvies and how it contribute to addressing the gaps.
 - How to integrate: Explicitly position your study within the theoretical framework
 - An example: This study applies Transformational Leadership Theory to explore the impact of leadership behaviours on employee engagement across multi-level contexts. By testing the theory under these conditions, this research aims to extend its applicability and provide practical insights for leadership development.

INTEGRATING THEORETICAL FRAMEWORK INTO LITERATURE REVIEW

- At later stage, use the framework to critique and synthesise previous studies.
- Example: Prior studies used XXX (Theory A), but the gaps remain in YYY (Specific area)

INTEGRATING THEORETICAL FRAMEWORK INTO METHODOLOGY

- Explain how the theory influences your study design, variables, and analysis.
- Example:
 - Study Design:
 - Connection to the theory

Transformational Leadership Theory emphasises leaders' behaviours (Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration) as drivers of follower outcomes. The study adopts a **multi-level quantitative design** to assess these leadership behaviours' effects at the **individual, dyadic, and group levels**.

Connect to methods:

This study employs a multi-level quantitative design to examine the impact of transformational leadership behaviours on employee performance and engagement. Guided by Transformational Leadership Theory, the design focuses on capturing interactions at individual, dyadic, and group levels to understand boundary conditions influencing leadership effectiveness.

Variables:

Independent Variables (IVs) → derived from the theory

The independent variables, derived from Transformational Leadership Theory, include Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. These constructs were operationalized using the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 1995), a validated measure widely used in leadership research.

- Dependent variables (DVs) → outcomes linked to the theory
 Dependent variables included employee engagement and job performance, consistent with prior research linking transformational leadership to positive workplace outcomes.
- Moderating variables → boundary conditions identified by the theory
 To account for boundary conditions, moderators such as group size and team
 tenure were included to examine their influence on the relationship between
 transformational leadership behaviours and follower outcomes

Analysis

Connection to the theory

Multi-level modelling (MLM) was employed to examine the relationships between leadership behaviours and employee outcomes at individual, dyadic, and group levels. This approach aligns with Transformational Leadership Theory's emphasis on interactions across hierarchical levels and allows for the testing of cross-level effects and boundary conditions.

INTEGRATING THEORETICAL FRAMEWORK INTO RESULTS

- Interpret finding in the context of the framework.
- For example: These findings align with XXXX (Theoretical framework you used in the paper), confirming that YYYYY.

INTEGRATING THEORETICAL FRAMEWORK IN THE DISCUSSION AND CONCLUSIONS

- Reflect on how the theory adds value and whether it needs modification based on your findings.
 - Confirming the theory: By confirming the positive effects of these behaviours across multiple levels of analysis, this study reinforces the relevance of Transformational Leadership Theory in modern workplace contexts.
 - Extend the theory: While the original framework primarily focused on individual-level outcomes, our findings suggest that transformational leadership behaviours also exert significant cross-level effects. This extension highlights the theory's XXXXX.

CHALLENGES

 How to select the right framework → Your theoretical framework must align with the research questions

Research question: What motivates employees to excel in remote work setting (work from home)

This is very

Keywords (or Key construct): Motivation, autonomy, productivity important...

Potential framework: Self-determination theory (link to **motivation** and **autonomy**), Goal-setting theory (link to **productivity**), and more... remember, link these theories to your keywords

 Theory not matching the findings → Be transparent and discuss how this contributes to theoretical advancement.

KEY TAKEAWAY

- Theory ties your research together
- Emphasise the importance of clarity and consistency when applying theory...