

# Construction Industry: A Review of Transformational and Transactional Leadership and Multifactor Leadership Questionnaire

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**ABSTRACT:** Leadership is a critical educational outcome for civil engineering programs. American Society of Civil Engineers in “The Vision for Civil Engineering in 2025” placed an emphasis for development of soft skills such as leadership and asserted a need for stronger educational path that can prepare civil engineers for leading the projects. Other reasons including the growing need for civil engineers to lead teams of diverse professionals in the construction projects make leadership a priority for civil engineering education programs. The purpose of this paper is to review the literature associated with Transformational and Transactional Leadership theories as two of the well-studied leadership theories that have been evaluated by the Multifactor Leadership Questionnaire (MLQ). The information gathered and studied can provide guidance to university and college faculty who instruct undergraduate civil engineering.

**KEYWORDS:** Civil Engineering, Construction Industry, Transformational Leadership, Transactional Leadership, Multifactor Leadership Questionnaire

## I. INTRODUCTION

Leadership skills are critical for the implementation of any construction project. Civil engineers as the supervisors of Hispanic construction workers will have to command the leadership aspects of their work in order to execute complex projects that involve various stakeholders [1]. Other reasons, including the rising need for civil engineers to lead teams of diverse professionals in the construction projects [2,3], growing complexity and the rapidly changing nature of construction projects [4,5,6,7,8], make leadership a priority for civil engineering and construction professionals as the industry moves forward [9,10,11].

## II. BACKGROUND

Leadership has been defined in many ways. [12] by reviewing 587 publications, found 221 distinct classifications of leadership. While the search for a single definition of leadership is pointless [13], for the purpose of this study leadership can be defined as the process of influencing groups toward the attainment of a group goal, and leader is someone who can influence others [14,15]. Two of the well-studied leadership theories that have been evaluated by the Multifactor Leadership Questionnaire (MLQ) are Transformational and Transactional Leadership theories [16,17,18,19,20,21,22,23]. According to [24] over the past 30 years, Transformational Leadership has been “the single most studied and debated idea with the field of leadership” (p. 299). While Transactional and Transformational leadership are distinct in concept and in practice, but a considerable body of research has demonstrated that transformational leadership greatly complements transactional leadership, contributing to higher levels of individual, group, and organizational performance[25].

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## III. TRANSFORMATIONAL

The transformational leadership concept was originally developed by [26], and later expanded by Bernard Bass (1985) [27]. [28] stated that “transformational leadership occurs when leaders broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group”. In particular, transformational leadership is manifested by charisma and shared vision between leaders and their subordinates [29]. Transformational leadership is different from the concept of charismatic leadership [30], but charisma is an integral component of transformational leadership [13].

According to [31], transformational leadership has four dimensions including: Idealized Influence, Inspirational motivation, Intellectual stimulation and Individualized consideration. These four dimensions work together to make leaders transformational figures.

*Idealized Influence:* Idealized Influence, also known as charismatic leadership, is defined as characteristic of a leader who behaves in a manner consistent to articulated ethics, principles and values [32] that cause followers to identify with the leader [33]. Idealized influence is exhibited in leaders through their attributes (IIA) and behaviors (IIB) [34]. Idealized Influence attributes refer to the perceptions of subordinates toward the traits attributed to a leader. According to [35], IIA explains a leader who is an exemplary role model and is respected, admired and trusted by his/her followers [36]. On the other hand, Idealized Influence Behaviors refers to the perceptions of subordinates toward the leaders' observable behavior. IIB explains a leader who can be trusted and displays solid moral and ethical principles [35].

*Intellectual stimulation* shows the degree to which the leader challenges assumptions of followers' beliefs and solicits their perspectives [36,37]). These leaders do not criticize followers when they differ from their ideas [38]; rather, they encourage and stimulate followers to think outside the box and be creative in thinking of new solutions for overcoming obstacles in the way of the mission [25].

*Individualized consideration:* refers to a leader who considers individual needs of followers [38] and acts as a mentor or coach to the follower. Leaders with this trait pay attention to the followers' concerns [33] and give respect to and appreciation of the individual's contribution to the group [25].

*Inspirational motivation:* measures the degree to which the leader provides a vision that is appealing to and inspiring the followers [33]. These leaders display enthusiasm and optimism about future goals, and offers meaning for the current tasks in hand [39] and employ proper images and symbols to help followers concentrate on their works [29].

## IV. TRANSACTIONAL

Transactional leadership is defined as exchanges that occur between leaders and subordinates [30,40]. Transactional leaders specify followers' responsibilities and task requirements [27,41] and provide rewards for fulfilling those requirements within contractual agreement between the leader and the employees [42]. This type of leadership concentrate on extrinsic rewards, such as monetary incentives and promotion, minimize workplace anxiety, avoid risk, and focus on efficiency [43]. In contrast with Transformational leaders, Transactional leaders “are not looking to change the future, they are looking to merely keep things the same.” [25]

The first component of transactional leadership is contingent reward and it shows the degree to which the leader sets up expectations and establishes the rewards in exchange for their good performance and achievement of appropriate results [29,42]. A study by [44] on building professionals who were responsible for the design, construction, and maintenance of buildings found that the most important transactional behavior is contingent reward.

The second component of transactional leadership is active management by exception. Within active management by exception the leader monitors each subordinate's performance and initiates corrective actions to avoid mistakes and prevent the behavior that creates serious difficulties [33,34].

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## V. MULTIFACTOR LEADERSHIP QUESTIONNAIRE

The Multifactor Leadership Questionnaire (MLQ-5X) was developed by [45] and is the standard instrument for measuring transformational and transactional leadership behavior. The MLQ-5X tool is developed to assess a wider scope of leadership styles from leaders giving contingent rewards to their employees, to leaders who transform and empower their employees and give them an opportunity to be leaders themselves [45].

According to [45] the aim of the MLQ is not to label a leader as transformational or transactional, but rather to identify a leader as “more transformational than the norm” or “less transactional than the norm”. The instrument *has* been tested internally as well as externally and is *broadly used* within public and private organizations, from CEOs of major corporations to non-supervisory project leaders [45,46]

Major Advantages of MLQ-5x, include [46]:

- It is much wider than other leadership surveys.
- It is used to evaluate effectiveness of leadership at all levels of management, including clients and customers as sources of ratings.
- It can be applied across cultures.
- Its emphasis on personal and intellectual development, and directions the leader may pursue to be more effective.

The MLQ provides accurate and in depth feedback that announces manager's ability to lead the organization, its development teams and individuals on various levels [46]. The feedback gives useful information on the type of leader that exists at the present time and how well the leader works in relation to promoting efficiency, satisfaction and the highest possible performance at work [45,46].

### Reliability of MLQ5X

A) Transformational Leadership Items:

*Idealized Influence*: According to [35] the reliability Cronbach's alpha scores were .91 and 0.86 for idealized influence attributed and idealized influence behavior subscales, respectively. Subsequent studies reported high reliability scores for the IIA and IIB constructs [36,47,48]

*Intellectual stimulation* According to [31], the reliability Cronbach's alpha scores were .78 for intellectual stimulation subscale. Similarly, other studies reported high reliability scores for the intellectual stimulation construct [36,47,48]

*Individualized consideration*: [31] reported the reliability Cronbach's alpha of .84 for Individualized Consideration subscale and subsequent studies showed reliability scores above 0.7 [47,48,49].

*Inspirational motivation*: Research has reported high reliability results for inspirational motivation construct [47,48]. For example, a study by [35], showed the reliability score of 0.91 for the inspirational motivation subscale.

## VI. CONCLUSION

Growing need for civil engineers to lead teams of diverse professionals in the construction projects make leadership a priority for civil engineering education programs. This paper reviews and summarizes the literature related to transformational and transactional leadership and Multifactor Leadership Questionnaire. By focusing on the facets associated with transformational leadership, this paper provides a draft that can be more developed in future studies.

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