

# Leadership Style of the Philippine Institute of Civil Engineers (PICE) - Aurora Chapter Members

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*Abstract- Leadership is a cornerstone of effective management, profoundly shaping the well-being of organizations and societies (Wehrich, et al., 2008). Its pivotal role in organizational success and national development has spurred extensive scholarly inquiry into its multifaceted nature and effectiveness. Among the myriad theories expounding on leadership, two emerge as paramount, Transformational and Transactional leadership theories. Transformational leadership, characterized by its ability to inspire and motivate followers to achieve exceptional outcomes (Robbins and Coulter, 2007), stands in contrast to Transactional leadership, also known as managerial leadership. While the former focuses on stimulating innovation and individual growth, the latter centers on supervision, organization, and group performance, employing rewards and punishments to secure follower compliance. The relevance of leadership extends beyond corporate boardrooms to diverse professions, including civil engineering, renowned for its breadth and versatility. Civil engineers, entrusted with infrastructure design, construction, and maintenance, exemplify creative problem-solving as they navigate complex projects while harmonizing with the natural environment. Their adeptness in applying managerial skills underscores their pivotal role in project success. This study delves into the leadership dynamics within a specific Philippine Institute of Civil Engineers (PICE) chapter – the Aurora Chapter. Researchers endeavor to delineate the prevailing leadership styles among its members, distinguishing between transformational and transactional orientations. Through this exploration, insights emerge into the leadership fabric shaping the trajectory of this esteemed civil engineering organization, offering valuable*

*implications for leadership development and organizational effectiveness in the field.*

*Indexed Terms- Leadership, Transformational Leadership, Transactional Leadership, Civil Engineering*

## I. INTRODUCTION

Transactional leadership relies on processes and control, necessitating a rigid management structure. In contrast, transformational leadership focuses on motivating others to follow, requiring a high level of coordination, communication, and cooperation. Transactional leaders typically manage by exception, meaning they do not make changes or get involved if everything goes as planned. However, they address negative exceptions, such as missed sales goals or production quality targets, immediately. This leadership style can be observed to varying degrees and depends on specific goals and vision. Transformational leaders, according to psychologist Ronald E. Riggio, have high expectations for their followers and believe they can perform at their best. As a result, they inspire, empower, and motivate followers to surpass normal performance levels.

A study conducted by Jason W. Mitchell in December 2019 examined the potential for leaders to create transactional or transformational environments, to identify issues that make it difficult for public executives to lead effectively; that is, the aim was to identify factors that prevent executives from providing high-quality and efficient public services and implementing change management. According to the findings of his study, it is not intended to promote categorizing leaders as transformational or transactional. It is more appropriate to classify a leader or group of leaders as

"more transformational than average" or "less transactional than average." The research reveals specific demographics and the propensity of certain groups to favor transformational or transactional leadership styles.

Author Mark Sanborn contends that leadership transcends mere titles, emphasizing instead the importance of fostering others' growth. According to him, authentic leadership entails acting with purpose, demonstrating genuine care for others, actively listening to their perspectives, and seeking impactful ways to nurture and empower them. In their capacity as civil engineers, individuals are inherently called to assume leadership roles. Responsible for conceiving, designing, constructing, and maintaining vital infrastructural systems that profoundly influence society, they must embrace their role as servant leaders and catalysts for change. It falls upon them to lay the groundwork for an inclusive socioeconomic framework that prioritizes equity. Moreover, they bear the responsibility of serving as custodians of the environment, integrating sustainability principles into all facets of their work (Truax, 2021).

The Philippine Institute of Civil Engineers, or PICE, is a professional organization for civil engineers in the Philippines. The organization was created by merging two separate groups of civil engineers—one from the government sector and the other from the private sector. The main objectives of both associations were similar: to raise the standards of the profession, encourage research and engineering knowledge and technology, promote fellowship among members, and establish connections with other technological and scientific societies. The organization's mission is to improve the welfare of its members and the development and prestige of the civil engineering profession and to play a dynamic role in nation-building. The organization aims to be a leading global professional organization known for professionalism, integrity, excellence, and social responsibility, and to be a key player in nation-building. The organization upholds core values of Professionalism, Integrity, Leadership, Excellence, and Social Responsibility.

On February 10, 1988, with Engr. Jose A. Baetiong serving as its first chapter president, the Philippine

Institute of Civil Engineers granted charter number sixty-eight (#68) to the Aurora Chapter. Engineers Jaime A. Gose and Rosauro R. Guerrero followed him, and now Engineer Pedro Fernando D. Valenzuela serves as chapter president. Over the years, the chapter has attracted a large number of members and elected several sets of officers. These members and officers operate in various offices inside or outside the province of Aurora. Several of these members and officers are unquestionably effective administrators in their respective fields and offices.

With this knowledge, the researchers wanted to investigate the members' leadership styles of the Aurora Chapter of the Philippine Institute of Civil Engineers had a major influence on their ability to lead effectively. In addition, the researchers sought to categorize the organization's members according to whether they were transactional or transformational. Furthermore, the researchers aimed to classify the members of the organization based on whether their traits were transformational or transactional. This aligns with the goals shown below.

- *Distinguish between transformational and transactional leadership through the leadership styles of PICE – Aurora chapter members;*
- *Distinguish issues contributing to an individual's approach in leadership about their managerial ranks and/or position; and,*
- *Discuss whether an individual's current demographic information affects their leadership style.*

## II. METHODOLOGY

This study sought to ascertain whether the Aurora Chapter of the Philippine Institute of Civil Engineers substantially contributed to the members' successful leadership style by examining their leadership styles. This study was conducted in the province of Aurora, Philippines between December 10, 2022, and January 30, 2023. This study included several offices from the localities, including Baler, San Luis, Maria Aurora, and Dipaculao, from which the survey respondents were drawn. These offices include Provincial and Municipal Government units and other government sectors, the Aurora State College

of Technology (a state college in the province), and some private construction companies operating there. Fifty (50) respondents were selected using purposive sampling from the chapter members to participate in interviews and answer survey questions to meet the primary objective of this study. Purposive sampling involves setting criteria based on the research objectives and selecting units that can provide meaningful responses. It is a technique used in qualitative research to select a group of individuals or units for analysis whereas, the participants are chosen “on purpose”, not randomly. The respondents were chosen using this technique, which relied on the researchers' judgment and knowledge of the respondents to the study's objectives.

The researchers in this study collected data within the natural environment of the phenomenon under investigation by conducting surveys and interviews. The survey questionnaires included demographic questions the researchers used to potentially contribute to the survey questions to analyze the respondents' attributes between transformational and transactional leadership. The demographic questions included the following:

- Current organization;
- Age when a chapter member obtained a leadership position;
- Salary in current position;
- Years of experience in a leadership role;
- Gender;
- Ethnic group;
- Educational Background;
- Job Classification;

In addition, the survey questionnaire addresses many areas of leadership, such as personal experiences, leadership style, conflict resolution, decision-making, team management, and leading by example. They provide a full assessment of a candidate's leadership talents, skills, and approach. The respondents rated their answers on a five-point Likert Scale which will be beneficial for this study. Unlike simple “yes” or “no” questions, the Likert Scale measures the degree of opinion and leads to more accurate and reliable data. The five-point Likert Scale employed in this study is as follows:

1 – Very Poor

2 – Poor

3 – Average

4 – Good

5 – Very Good

According to Bill Hogg (2012), in order to effectively and consistently grow an organization, leaders with specific characteristics become not only effective leaders but also transformational leaders.

- Internal motivation and self-management;
- Can make difficult decisions;
- Checks their ego;
- Willing to take the right risks;
- Has organizational consciousness;
- Adaptive
- Willing to listen and entertain new ideas;
- Inspirational;
- Proactive; and,
- Visionary.

Transformational leaders constantly strive to have these characteristics. Developing these characteristics is what separates companies that are led by managers versus leaders. Therefore, the following questions are used to address areas of leadership of the respondents, between transformational and transactional leadership.

1. *Please rate your ability to provide a detailed account of a single time when you demonstrated leadership qualities in a work-related environment.*
2. *How well do you express and identify your leadership style?*
3. *Please rate the importance of key supporting abilities for a leader.*
4. *How good are you at dealing with conflict situations?*
5. *How well can you describe the most difficult decision you've taken as a leader, as well as the circumstances that affected your decision?*
6. *How adept are you at putting measures in place to ensure that your team produces high-quality work within the time and budget restrictions set?*
7. *To what extent are you able to inspire an underperforming team member to raise their game?*
8. *How effectively as a leader can you explain and assess how you handle delegation?*

9. How well can you describe a particular situation in which you led by example?
10. How well do you handle and respond to ideas and comments from your team members?

The purpose of this research is to determine if there is a significant difference in the leadership styles of the members of the Philippine Institute of Civil Engineers (PICE) – Aurora Chapter, specifically, transformational and transactional leadership.

*Hypothesis: There is no significant difference in the leadership styles of the Philippine Institute of Civil Engineers (PICE) – Aurora Chapter members.*

To assess whether there is a notable contrast in the leadership approaches of the Philippine Institute of Civil Engineers (PICE) – Aurora Chapter members, the researchers employed a t-test to examine and interpret the collected data. This statistical technique enabled them to compare the two kinds of leadership styles: transformational and transactional. The researchers conducted both one-tailed and two-tailed tests to ensure precise outcomes.

### III. RESULTS AND FINDINGS

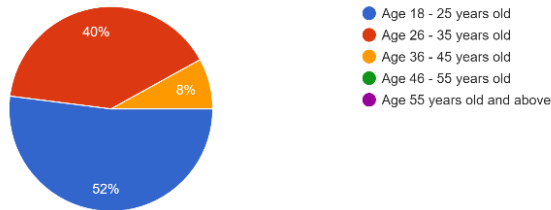


Figure 1 Age When a Leadership Position was First Obtained

Figure 1 illustrates that 52% of the respondents attained a leadership position between the ages of 18 and 25. 40% of the respondents achieved this between the ages of 26 and 35, while the remaining individuals obtained leadership positions between the ages of 36 and 45.

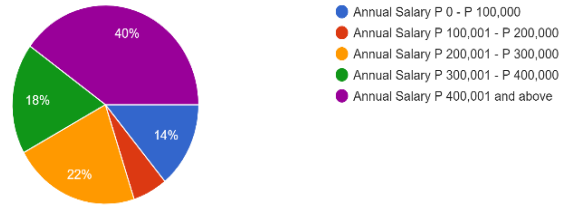


Figure 2 Current Annual Salary

In Figure 2, it is shown that 40% of the respondents have an annual salary of Php 400,001 and above, 22% have an annual salary of Php 200,001 to Php 300,000, 18% of the respondents have a yearly salary of Php 300,001 to Php 400,000, 14% have a yearly salary of Php 100,000 or less, and the remainder of the respondents were paid between Php 100,001 to Php 200,000 each year.

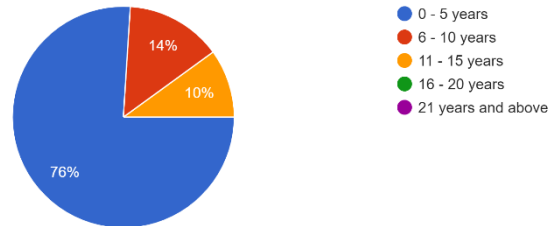


Figure 3 Years of Experience in a Leadership Role

In Figure 3, it shows that 76% of the total respondents have 5 years or less of experience in a leadership role, 14% have 6 to 10 years of experience, and the rest have 11 to 15 years of experience.

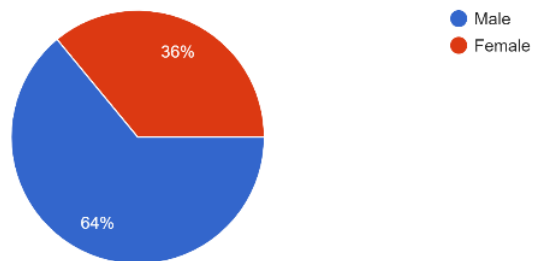


Figure 4 Respondents' Gender

It is illustrated in Figure 4 that 64% of the respondents are male, while 36% are female.

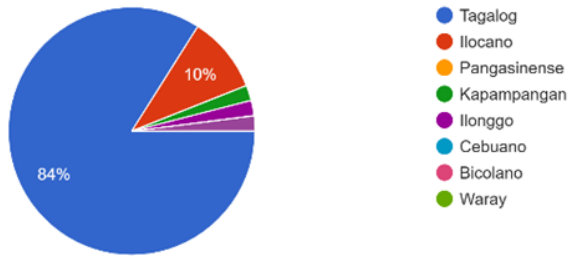


Figure 5 Ethnic Group of Respondents

Figure 5 illustrates the ethnic groups to which respondents belong: 84% Tagalogs, 10% Ilocanos, 2% Kapampangans, 2% Ilonggos, and 2% Casiguranins (locals from Casiguran, Aurora).

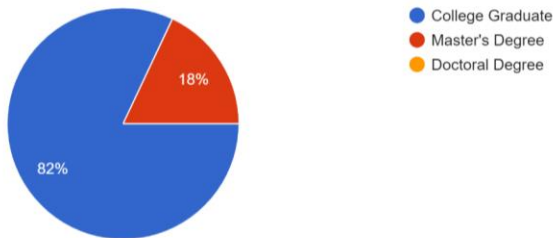


Figure 6 Educational Attainment of Respondents

Figure 6 illustrates that the majority of the respondents (82%) hold a Bachelor's Degree (Undergraduate), while the remaining 18% have a Master's Degree (Graduate Studies).

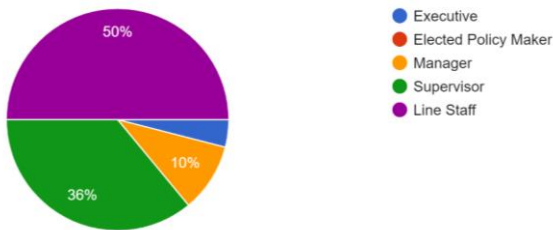


Figure 7 Job Classification of Respondents

Figure 7 shows that 50% of the respondents work as Line Staff, 36% as Supervisors, 10% as Managers, and the remaining 4% as Executives.

Current Organization of PICE - Aurora Chapter Members

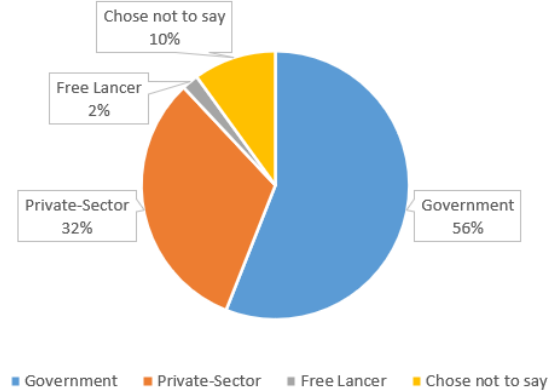


Figure 8 Current Company/Organization

Figure 8 shows that 56% of the respondents are government employees. They work for the provincial or municipal government (under the Engineering Office), as instructors or professors in a state college, or in government sectors such as the Department of Public Works and Highways (DPWH), the Department of Social Welfare and Development, and the National Irrigation Administration (NIA). 32% of the respondents work in the private sector or for private companies, 2% are freelancers, and the remaining 10% chose not to state where they currently work.

In Table 1 below, the weighted mean and overall scale of the responses from the gathered data are presented. The table indicates that members of the Philippine Institute of Civil Engineers (PICE) – Aurora Chapter, from their respective fields and offices, exhibit positive traits and characteristics of transformational leadership based on the assessment questions in this study.

LEADERSHIP ASSESSMENT		
QUESTION	AVERAGE	OVERALL SCALE
Please rate your ability to provide a detailed account of a single time when you demonstrated leadership qualities in a work-related environment.	3.86	GOOD

How well do you express and identify your leadership style?	3.90	GOOD
Please rate the importance of key supporting abilities for a leader.	4.48	GOOD
How good are you at dealing with conflict situations?	3.92	GOOD
How well can you describe the most difficult decision you've taken as a leader, as well as the circumstances that affected your decision?	3.98	GOOD
How adept are you at putting measures in place to ensure that your team produces high-quality work within the time and budget restrictions set?	4.08	GOOD
To what extent are you able to inspire an underperforming team member to raise their game?	4.06	GOOD
To what extent are you able to describe and evaluate your delegation style as a leader?	3.96	GOOD
How well can you describe a particular situation in which you led by example?	4.16	GOOD
How well do you handle and respond to ideas and comments from your team	4.26	GOOD

IV.

members?		
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Table 1. Leadership Assessment

CONCLUSION

The study unveils a significant trend indicating that the development of effective leadership traits among PICE–Aurora Chapter members often commences during their college years, typically between the ages of 18 and 25, and continues to evolve post-graduation as they navigate their careers. Furthermore, the survey underscores the motivational impact of higher salaries on members, compelling them to enhance their effectiveness within their respective fields.

Leadership cultivation within the PICE–Aurora Chapter frequently initiates early on as members transition into organizational roles after completing their education. For instance, civil engineers often find themselves overseeing labor and manpower to drive project completion. This is reinforced by the finding that 76% of respondents possess five years or less of work experience in leadership roles. Additionally, the data reveals that 82% of respondents hold Bachelor’s Degrees, with the remaining 18% holding Master’s Degrees. Notably, while the majority of respondents are male (64%), the acknowledgment of effective female leadership (36%) underscores the commitment to diversity and inclusivity within the organization.

The demographic breakdown further illustrates diversity within the chapter, with members representing various ethnic groups such as Tagalogs, Ilocanos, Kapampangans, Ilonggos, and Casiguranins. Recognizing this diversity is paramount, as transformational leadership hinges on creating an environment where individuals from diverse backgrounds feel esteemed and included.

Moreover, a notable proportion (56%) of chapter members are employed in the government sector, possibly influenced by the pursuit of higher education, as evidenced by 18% currently pursuing Master’s Degrees. In the Philippines, a Master’s Degree often serves as a prerequisite for government sector employment, particularly in teaching or instructional roles at the collegiate level. The prevalence of lower-level or entry-level roles among

chapter members, with 50% identified as line staff, highlights the early emergence of leadership opportunities, especially within the engineering field. Conclusively, the results of the leadership assessment survey conducted for this study strongly suggest that members of the Philippine Institute of Civil Engineers (PICE) – Aurora Chapter exhibit commendable characteristics indicative of transformational leadership. Hence, it can be concluded that the Philippine Institute of Civil Engineers upholds its mission, vision, and core values, which significantly influence the leadership styles and approaches of its members, shaping them into transformational leaders who can bring benefits to their organizations and society.

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