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Examining the Role of Leadership Style on Team Performance in the Construction Site of Sikkim

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Abstract: ***In the construction sector, where collaboration is crucial in intricate and changing settings, leadership has a significant impact on project outcomes. The impact of transactional, transformational, laissez-faire, autocratic, bureaucratic, charismatic, democratic, strategic, and coach-style leadership philosophies on construction project team performance is investigated in this study. The study assesses how different approaches affect team members, project managers, project engineers, and communication, motivation, and project success using survey and case data. While transactional leadership works well for guaranteeing task completion under time limitations, the data indicate that bureaucratic leadership improves team cohesion and overall project performance. Conversely, ineffective teams and subpar project results are linked to democratic leadership. These results emphasize how critical it is to use adaptable leadership techniques that consider team dynamics and project requirements. By providing useful suggestions for leadership development programs targeted at creating high-performance teams, the study advances construction management research. It also implies that adaptable leadership techniques are essential to long-term success in project settings.***
Keywords: leadership, construction, teamwork.

I. INTRODUCTION

Among the most complex and demanding industries in the world economy is the building sector. High degrees of complexity, a varied workforce, tight timelines, financial restraints, and the requirement for continuous collaboration between numerous stakeholders—including customers, contractors, subcontractors, suppliers, and regulatory agencies—are its defining characteristics. Despite these obstacles, effective leadership is essential to project success. Construction teams' performance, the success of project execution, the settlement of disputes, and eventually the accomplishment of project objectives are all directly impacted by the effectiveness of leadership. Although strategic planning and technical know-how are essential in construction management, they are insufficient on their own to ensure project success. The human element of project management is equally important, especially the way leaders influence and engage with their teams. Studies have indicated that proficient leadership can enhance communication, encourage teamwork, lower on-site incidents, and stimulate creativity—all of which are vital in the building sector. In contrast, inadequate leadership. The purpose of this study is to investigate how various leadership philosophies function in the context of building projects. It will investigate the effects of particular leadership philosophies on important project performance metrics like budget, schedule, quality, safety, and team satisfaction. Finding the best leadership philosophies for handling the particular difficulties of building sites is another goal of the study. By doing this, the study will provide insightful information about the finest leadership approaches in construction management, guiding both present and future leaders in the industry. To build more resilient, effective, and high-performing project teams, it is crucial to comprehend the connection between leadership philosophies and construction project results. As the construction sector continues to change due to new technology, environmental objectives, and intricate stakeholder expectations, project success will depend more and more on flexible and capable leadership.

II. TYPES OF LEADERSHIP STYLE

Managerial attitudes, behaviours, traits, and abilities that are characterized by personal and group interests, dependability, and values are known as leadership styles. We identified nine primary leadership styles in these papers: laissez-faire, transformational, transactional, coach-style, autocratic, democratic, strategic, bureaucratic, and charismatic. Employee dedication, productivity, and performance can all be directly impacted by these leadership philosophies.

Under autocratic leadership, one individual—typically the boss or leader—makes all the decisions and expects everyone else to follow suit with no debate. It can be quite useful in circumstances requiring prompt decision-making or when precise actions must be taken, such as in emergencies or at workplaces with stringent regulations. One advantage of this method is that it establishes structure and can save time because there is no back-and-forth.

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On the downside, though, it can give people the impression that their opinions are unimportant. Team members may become demotivated or feel disengaged from their work if they are not permitted to participate in the process or exchange ideas.

Democratic leadership is centred on collaboration and collective decision-making. The team is involved, the leader hears everyone's opinions, and decisions are made together rather than by a single person. It fosters trust and gives people a sense that their thoughts are valued. Because each person contributes something unique, this approach frequently results in better, more innovative ideas, which is one of its best features. Because they have influenced team spirit and increased people's commitment to it. However, it is not flawless; in certain cases, it may take longer to reach a judgment, particularly when there are conflicting viewpoints or a lot of ideas being expressed.

The leader with a strategic leadership style guides the organisation through a clear vision and develops tactics to reach those goals. It places more emphasis on planning, foreseeing potential difficulties, and coordinating the team with the organization's overarching goal than more conventional leadership approaches. This approach promotes creativity, flexibility, and vision as the team's Leader guides them through present and upcoming obstacles. Keeping the team focused on long-term goals and enabling them to adjust to changes in the market or environment are two key benefits of strategic leadership, which can lead to substantial growth and success. Its tendency to prioritise long-term goals over short-term chores is one of its drawbacks, though.

A bureaucratic leadership style is one in which there is a clear line of command and all operations follow the leader's strict adherence to these principles. This method works well for professions requiring a lot of accuracy, structure, or safety, such as those in factories, government offices, or hospitals. Because judgements are made according to standards rather than subjective judgements, it has the major advantage of fostering uniformity and fairness. The drawback is that it may seem restrictive and inflexible. Creativity, fresh concepts, and adaptability are a few. If people wish to innovate or improve things, they may feel stuck merely going through the motions, which can be irritating.

In essence, laissez-faire leadership is a leadership approach that does not include direct supervision. The team makes most of the decisions without the team leader's input. When team members are knowledgeable, experienced, and skilled, it functions incredibly effectively. One of the most significant advantages is that it allows individual to be creative and take responsibility for their work, which can greatly increase motivation and self-esteem. However, it isn't always flawless. Without sufficient direction, things may become a little disorganised. It's possible for certain team member to feel disoriented or unclear about their roles. If people are not in agreement, it may also result in delays or inconsistencies.

The hallmark of charismatic leadership is a leader's personality, someone who exudes confidence, inspires others, and has interpersonal skills. These leaders typically have a clear vision and know how to get everyone interested and on board. They inspire people to feel appreciated and driven, which can greatly strengthen team spirit and encourage everyone to give it their utmost, particularly during uncertain or changing times. Teams may occasionally become overly dependent on the leader and become overly focused on them. The team may feel lost if the leader leaves or commits a mistake. Decision-making may also be influenced more by the charisma or feelings of the leader than by cooperation or common sense.

Coach-style leadership is similar to having a mentor who also serves as your guide. Rather than only giving instructions, they concentrate on assisting each team member in developing, learning, and realizing their greatest potential. They assist in setting goals that align with the needs of the team and the individual's abilities, provide feedback, and conduct frequent check-ins. This type of leadership fosters close bonds and a growth-oriented, encouraging atmosphere where individuals feel valued and supported. Particularly when the team is large or things are happening quickly, coaching requires patience, time, and genuine effort. But done correctly, it can bring out the best in people and build a team that is not just productive but also evolving.

Clear goals, structure, and performance-based rewards and penalties are the cornerstones of transactional leadership. People are quite clear about what is expected of them and what they will receive if they meet it, which is one of this style's advantages.

However, things are not always easy. The drawback is that it can come out as somewhat uninspired and stiff. Employees might not feel inspired to think creatively or unconventionally because the primary focus is on achieving short-term objectives. In the long run, it may create a somewhat "robotic" environment where individuals are merely following procedures to obtain their benefits.

Transformational leadership is all about motivating others to grow, think bigger, and collaborate toward a common goal. Leaders who employ this approach do more than just give commands; they engage with their teams on a deeper level, foster innovation, and assist individuals in reaching their full potential. One of the most significant benefits of this method is that it increases motivation and engagement. People are more likely to go above and above when they feel valued and a part of something worthwhile. It also performs effectively in circumstances that require creativity and new thinking. However, it isn't ideal. Transformational leadership may be less effective in situations requiring immediate judgments or rigorous adherence to regulations. Furthermore, it is strongly reliant on the leader's character and honesty.

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III.RESEARCH DESIGN AND METHODOLOGY

This study uses a mixed-methods approach, integrating quantitative and qualitative data collection, to assess leadership styles across different sectors of the Sikkim construction industry. To ensure that the research encompassed a variety of operational contexts within the construction sector, nine construction sites were chosen based on project complexity levels, ranging from high to low, to capture a wide range of perspectives. A structured questionnaire survey was used to recruit 100 participants for the study. These participants, who comprised ordinary workers, skilled labourers, supervisors, and site managers, offered insight into the dynamics of leadership at various levels. To address any potential language difficulties, the questionnaire was created in both Hindi and English. The research team needed to use a multilingual strategy because many of the workers in Sikkim are from other states and speak Hindi more fluently, while English made it easier to comprehend the data. Using a five-point Likert scale, the questionnaire asked participants to rate how much they agreed or disagreed with a variety of assertions about leadership methods and actions.

Supervisors and junior engineers at each site participated in semi-structured interviews in addition to the survey. The following topics were covered in these interviews:

- The leadership approach that they supported,
- The leadership approach they were using at the time in their position,
- Their thoughts and recommendations on several leadership philosophies in the construction industry.
- In addition to the quantitative data, these interviews offered insightful qualitative information that deepened our understanding of how leadership is viewed and applied at various organizational levels.

IV.LITERATURE REVIEW

As part of our research, we conducted a critical analysis of several studies on leadership styles and how they affect team performance and building. We found several significant gaps as a result of this investigation. First of all, a lot of previous research concentrated on only one leadership type, such as transformational or democratic leadership, without contrasting it with other forms like transactional, authoritarian, or laissez-faire leadership. This limited focus results in a limited understanding because different leadership styles may be needed for different types of building projects.

Second, we noticed that rather than using data from actual construction projects, a large portion of the currently available research relied on simulations and self-assessments. Due to this dependence, bias is questioned, and the findings' usefulness in actual building settings is diminished. Furthermore, no long-term observations of the dynamics of teams and leadership were made, which resulted in a dearth of knowledge on how long-lasting leadership effectiveness is.

Thirdly, it was challenging to generalize the results across various project environments because much of the research did not include a variety of construction project types. Significant external elements, including project complexity, organizational culture, technical developments, legal frameworks, and economic situations, were frequently not thoroughly examined. Ignoring these important contextual elements restricts our comprehension of how leadership philosophies affect project results in various contexts.

Finally, we discovered that although transformational leadership was given a lot of attention, not enough research had been done on how transactional leadership affected team performance. Organizations are left with inadequate information on how to modify leadership tactics to meet the demands of various projects due to the dearth of empirical research on varied leadership styles.

Thus, by performing a more extensive investigation spanning various leadership styles, project types, and external variables in the construction industry, our work seeks to solve these shortcomings through this in-depth gap analysis.

V. RESULT

A. Questionnaire Section A – General Information

This part is designed to collect important demographic and socioeconomic information about the labour respondent. The data gathered here will assist us in better understanding the workforce's background characteristics and socioeconomic conditions.

According to the data, male workers consistently outnumber female workers in all age categories, with the maximum concentration being in the age range of 31 to 40, where there are 30 male workers and 9 female workers. The 20–30 age range, which has 19 males and 6 women, is the second most represented. In the 41–50 age range, there are 18 men and 4 women, whereas only 7 men are in the Under-18 and Over-60 age ranges.

Interestingly, none of the responses fall into the "Prefer not to say" column, suggesting that every responder provided their gender. Furthermore, neither the youngest nor the oldest age groups have any female employees, indicating that the prime working-age groups may have a higher concentration of female workers.

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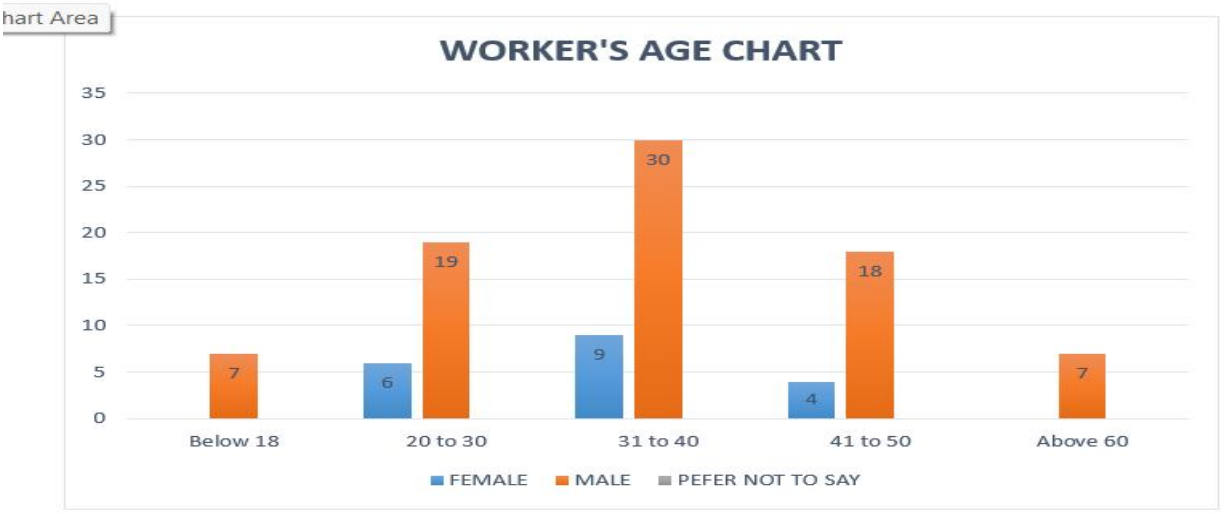
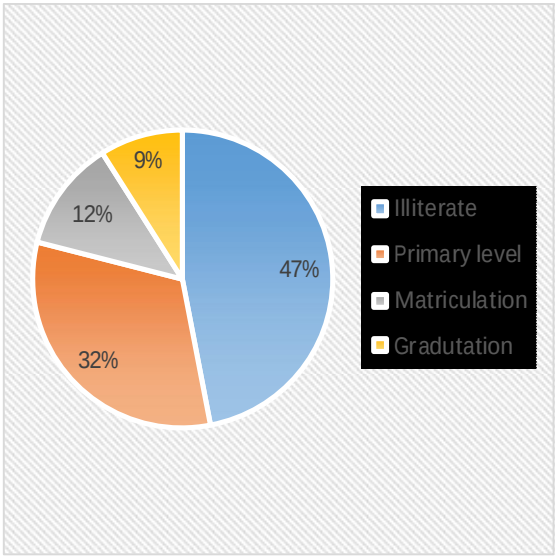
Age group	Female	Male
Below 18	0	17
20 to 30	6	19
31 to 40	9	30
41 to 50	4	19
Over 60	0	7



Data from 10 construction sites were gathered and arranged according to difficulty levels to document how project complexity affects leadership styles. In particular, two locations were categorized as medium-complexity projects, four as high-complexity projects, and four as low-complexity projects. This categorization made it possible to compare leadership practices in various operational settings, emphasizing how the complexity of building projects might affect leadership effectiveness and requirements.



Significantly, 47% of labourers have never gone to school and are illiterate. This reveals that a significant percentage of the workforce lacks access to basic education. Moreover, 32% had only finished primary school, suggesting that although they possess some foundational knowledge, their education ended abruptly. A slightly higher but still constrained level of education is demonstrated by the 12% of workers who have completed matriculation (10th grade). Just 9% of workers are presently enrolled in college-level (BA) programs, representing a minuscule portion of the workforce actively pursuing academic growth. This distribution shows that most workers are either completely unschooled or only modestly educated, which may affect their employability, rights to knowledge, and capacity to find skill-based work. Specific education and training programs may be essential to empowering this group and raising their socioeconomic standing.

Out of 100 workers polled, 77 were married and 23 were single, according to the demographic analysis of survey participants. This distribution shows that the majority of the sample's workforce (77%) was married, which may have consequences for leadership strategies that take work-life balance and family obligations into account.

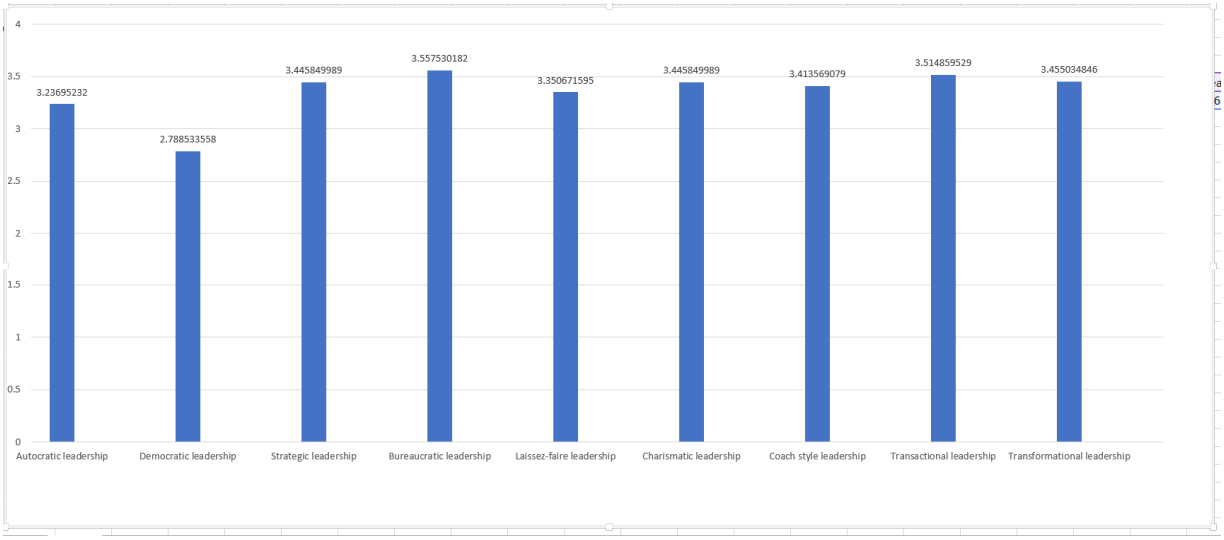
B. Questionnaire section B- impact, effect, and importance

The purpose of this part is to assess the different leadership philosophies that respondents have either personally encountered in the workplace or seen in managers, team leaders, or superiors. It consists of 36 well-crafted sentences that are methodically divided into nine different leadership philosophies. Four statements that highlight important traits, dispositions, or ways of making decisions that are commonly connected to each leadership style are used to symbolize each style. Participants will gain important insights on how various leadership philosophies are viewed and applied in their workplaces by answering these statements.

Likert scale:

Scale value	Response option
1	Strongly disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly agree

Nine different leadership philosophies are compared in a bar chart according to their evaluation results. Autocratic, Democratic, Strategic, Bureaucratic, Laissez-faire, Charismatic, Coach Style, Transactional, and Transformational leadership are among the styles of leadership that were evaluated. The scores show that the various styles are usually seen favourably, ranging from roughly 2.79 to 3.56. With a score of 3.56, bureaucratic leadership is the most highly ranked style, indicating a strong preference for or perception of efficacy. The Democratic leadership, on the other hand, was rated the lowest at 2.79, indicating comparatively lesser favourability. The scores of the other leadership philosophies—Strategic, Charismatic, Transactional, and Transformational—are nearly in line with each other, falling between 3.4 and 3.5. The majority of leadership styles are seen favourably, with bureaucratic leadership marginally outperforming others, according to the statistics, even though there are differences in perceived effectiveness.



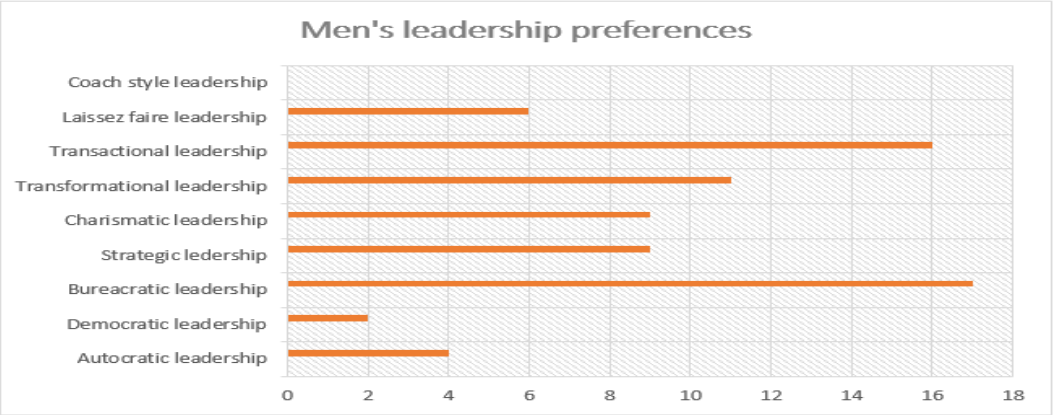
According to recent studies, rigorous adherence to policies and guidelines is essential for efficient project management, especially when a bureaucratic leadership style is being used. In areas like Sikkim, where organizational systems frequently call for consistency, stability, and unambiguous guidance, bureaucratic leadership proves to be a more appropriate model than alternative leadership philosophies.

Standardized processes, uniform enforcement of rules, and a clearly defined hierarchy are all emphasized under bureaucratic leadership. This leadership style guarantees that operations are conducted systematically and predictably, which is important in Sikkim, where both governmental and private sector initiatives frequently function under highly regulated frameworks. In addition to reducing the possibility of mistakes and inefficiencies, rigorous rule enforcement encourages team members to be accountable and transparent.

Furthermore, Sikkim's administrative and cultural milieu, which is marked by deference to authority and organized administration, enhances the efficacy of bureaucratic leadership. Leaders who adhere rigorously to established procedures are better equipped to manage resources, coordinate activities, and produce results within the predetermined parameters and timeframes. Therefore, bureaucratic leadership is favoured over more flexible or participative leadership models because it offers the control and discipline required to handle the challenges of project management in such a situation.

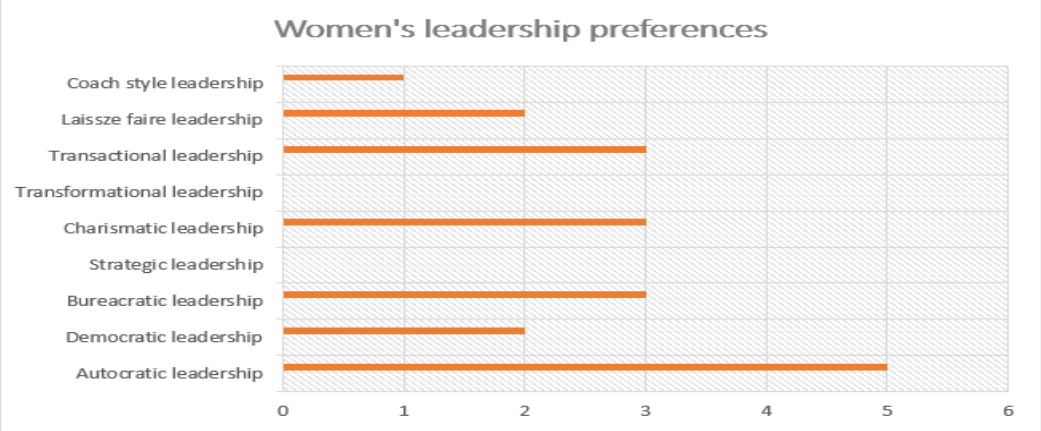
Alternatively, in areas like Sikkim, democratic leadership is the least desired approach to project implementation. Democratic leadership frequently causes delays in settings where prompt, rule-based action is crucial because it emphasizes shared authority, participatory decision-making, and group problem-solving. The need for widespread consultation and agreement can impede crucial decision-making processes in highly regulated and structured environments, resulting in inefficiencies and unclear direction. Furthermore, deference to formal authority and hierarchy is strongly expected in Sikkim's organizational and administrative culture. Stakeholders and employees may be more used to following explicit directions than having free-flowing conversations about corporate strategies. The adaptability and inclusivity that democratic leadership encourages in these situations can occasionally lead to misunderstandings, a reduction in accountability, and difficulties in upholding discipline. Hence, democratic leadership is less appropriate for project management situations in Sikkim, even though it can be very successful in settings that encourage originality, creativity, and employee liberty. Here, consistency, following protocols, and effective execution continue to be prioritised, as these are areas in which bureaucratic leadership performs noticeably better than democratic methods.

C. Workers' leadership preferences



This graph shows the different leadership philosophies that men prefer, emphasizing noteworthy patterns in their selections. The graph makes it clear that men prefer bureaucratic leadership, as selected by the greatest number of respondents. This suggests a strong preference for structure, regulations, and responsibilities that are well-defined. A high ranking for transactional leadership indicates that many men favour goal-oriented and reward-based leadership styles. With a balanced interest in inspiring and visionary traits, transformational, charismatic, and strategic leadership styles are moderately preferred. On the opposite end of the spectrum, Democratic leadership is the least preferred, with very few men opting for it. Coach style and autocratic leadership are also low on the list.

According to the findings, the majority of males choose leadership philosophies that prioritize authority, consistency, and order, whereas respondents to the study are less likely to favour collaborative and participatory approaches.



The leadership styles preferred by female employees are depicted in this graph. Here, women favour autocratic leadership over male leadership, with the greatest number of choices (five) indicating this preference. This implies that female employees have a propensity to prefer a leading style that is more authoritative, commanding, and decisive. The modest support given to other leadership philosophies, like transactional, charismatic, strategic, and bureaucratic leadership, all with values close to three, indicates a balanced interest in goal-oriented and organized leadership. Coach style leadership garnered the fewest selections (only one), while democratic and laissez-faire leadership styles received the fewest (two apiece). The data shows a striking discrepancy between the preferences of men and women: males choose bureaucratic leadership, while women prefer autocratic leadership. The choices of men were dominated by bureaucratic leadership, while Democratic leadership was the least preferred. These observations imply that gender may affect leadership preferences and expectations in the workplace, with women favouring firm and authoritative decision-making and men appreciating methodical procedures and regulations.

D. Questionnaire section C- open-ended discussion

Open-ended discussion questions intended to elicit opinions and recommendations on the participants' preferred leadership style make up the third segment of the survey. To identify the leadership skills that are highly valued in a particular organizational and cultural environment, this section will examine individual perceptions of what makes a good leader.

A variety of opinions and recommendations were obtained from the participants after the open-ended conversations. The fact that no one leadership style ensures success became evident; instead, a good leader frequently needs to use a variety of leadership techniques. A leader may need to take a firm stance one moment and a more relaxed, adaptable one the next, depending on the circumstances. According to the respondents, autocratic leadership is frequently used in practice out of the nine known leadership philosophies. The feedback indicates that promptness, humility, politeness, and the capacity to give employees some autonomy are characteristics of a good leader. To interact with the public and guarantee project success, a leader needs to be well-versed in project requirements, have excellent communication skills, and have real-world field experience. In addition to possessing technical drawing and administrative skills, leaders should be flexible enough to adjust to changing conditions and give suppliers precise instructions. Referencing the adage, "An empty vessel makes the most noise," respondents emphasized that those with the least amount of knowledge tend to speak the loudest. This emphasizes how crucial it is for a leader to possess in-depth knowledge, a long history, and the capacity to confidently communicate projects. Errors were analysed to find the underlying reasons and provide solutions, with a focus on mistakes as learning opportunities. According to the description, a competent leader also has great problem-solving abilities, efficient labour management, and effective execution techniques. Crucial leadership qualities that were also highlighted included empathy, composure under duress, and the capacity to function as both an attentive listener and an effective speaker. In response to the demands of the project and the team, the respondents concluded that a leader's style should be flexible and always changing. It was also emphasized that managers should provide staff with clear instructions, visit the site frequently, and make excellent decisions quickly.

VI. CONCLUSION

We learned about the drawbacks of this survey, which have a significant impact on leadership styles and project performance and outcomes. There are advantages and disadvantages to each style, and how well it works depends largely on the project's nature, team dynamics, and specific issues that arise during implementation. For instance, in situations requiring quick decisions, autocratic leadership may be effective; yet, democratic leadership fosters teamwork and new approaches to problem-solving, which can lead to creative solutions. While transformational leadership encourages and motivates teams to surpass objectives and improve project performance, transactional leadership focuses on assigned responsibilities and rewards to achieve efficiency and meet deadlines. If not handled carefully, laissez-faire leadership might lead to a lack of direction, but it works well when team members are self-motivated and professional. The quality, effectiveness, and general success of project delivery will ultimately be greatly impacted by the capacity to comprehend and adapt leadership styles to the demands of the team and project.

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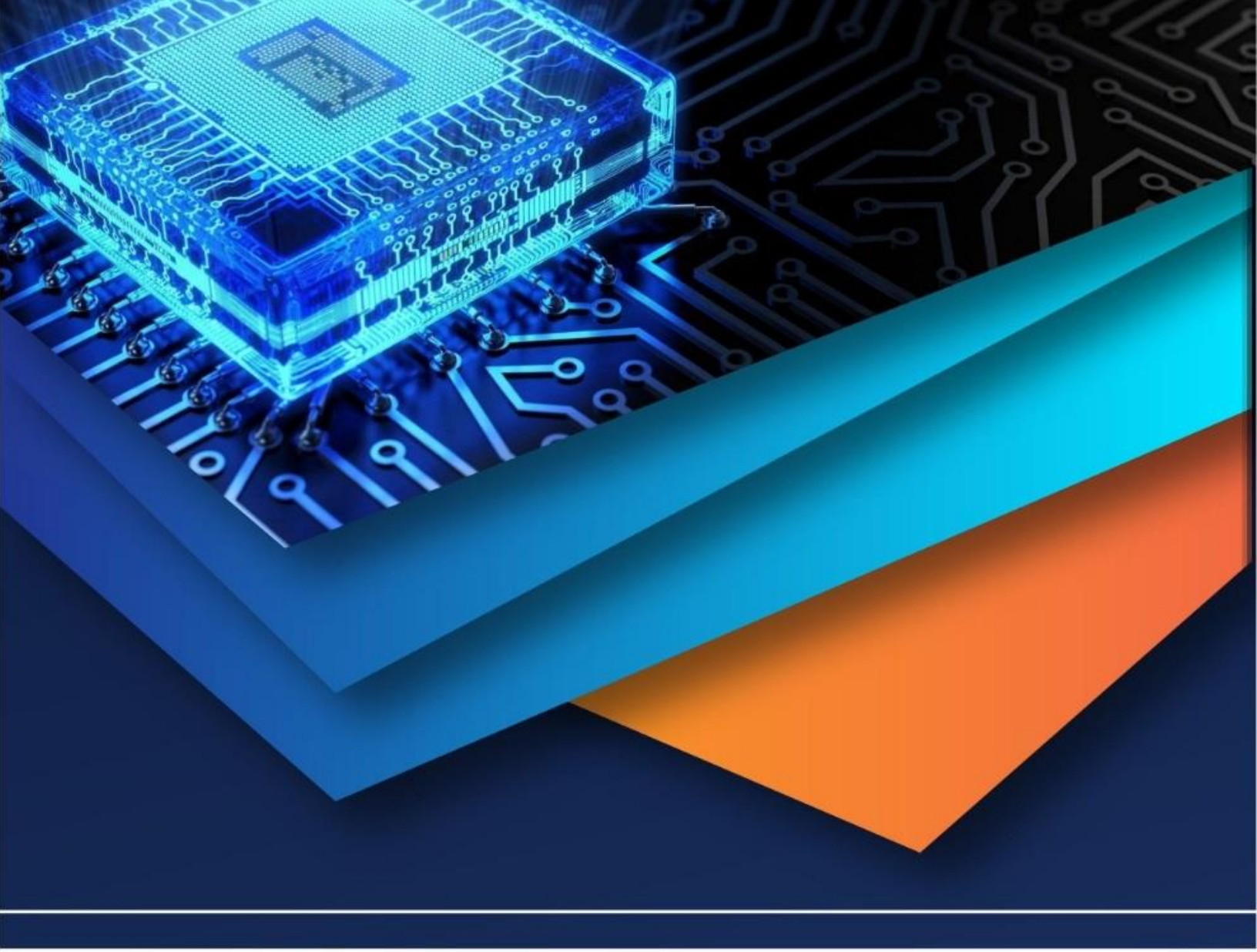

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