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A Case Study on Technology Implementation
Projects***

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Management

08th March 2024

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1. Introduction

The entire research dissertation has been summarized in a more effective and better way including the crucial points related to the leadership impact on the technology projects. The background information has been provided explaining the research aim and objectives. The methodology section is summarized including the crucial points that are important for the research. Consequently, the reflection on the dissertation has been provided including recommendations on ways to do it differently.

2. Executive Summary

The intention and purpose of the project are to study the impact of the leaders on the technology implementation project. The topic area of interest to be analysed and studied in detail is the role of the leaders in the success of technology projects.

3. Background Information

Leadership plays an important role in the success of the project. In the scenario of technology projects, there is a requirement for leaders with excellent skills and expertise to contribute to the project's success. Corporations rely more on technology to improve innovation, enhance productivity, as well as streamline their operations in the quicker-paced corporate world in recent times. The leaders are accountable for verifying the appropriateness of the technological instruments being undertaken related to the corporation's requirements (Cortellazzo, Bruni, and Zampieri, 2019). The quicker-paced technological evolution places higher demands on the corporation's capability to combat the continuously changing circumstances. The projects that need more integration of the technologies include challenges comprising ambiguity and uncertainty. However, the capability of the leaders to move past the challenges would help in developing a collaborative and higher-performing team environment. The leader's set of various skills and expertise would help them motivate, direct, and inspire their teams to attain a distinct set of purposes. In the corporations, the leaders influence or drive the employees as the role models. There is a requirement for the leadership to motivate the employees with support along with perseverance, enabling the unfolding of innovative proposals from the workers on their own (Campos et al., 2020). From the above analysis, it can be indicated that leadership plays an important role in the project work of the corporation due to its wide variety of skill sets and expertise.

3.1 Research Aim

The dissertation's crucial purpose is to see how leadership impacts the success of the project, particularly when this is about technology execution projects. In order to differentiate the leadership components that develop successful projects from those that do not succeed in meeting their goals, the research will inspect the specific behaviours as well as leadership practices that support the efficient execution of technology projects.

3.2 Research Objectives

The dissertation's crucial goal is to examine, in the framework of technology execution projects, the connection between project success as well as leadership. Specific goals include:

- To determine the essential leadership traits that help technology implementation initiatives succeed.
- To ascertain the impact of a project's leadership style on its completion time, cost, and stakeholder satisfaction.
- Analyse the connection between project team dynamics, such as morale, cooperation, communication, and leadership behaviours.

3.3 Identification of Problem

The problems of corporations and top companies hiring leaders are difficult due to the complexity of the technology projects. IT technology projects have certain challenges in the form of incorrectly defined corporation needs, changes in its purposes, insufficient resources, and project problems. For corporations, failed information technology (IT) projects can result in a waste of resources as well as delay the benefits of digitalization (Schmidt, 2023). However, the identified problems can be solved through stronger leadership in the companies. The corporations are required to hire leaders who are skilled in technology projects and have technical skill sets. From the above analysis, it can be indicated that the problems are of high demand technical skill sets required in the modern world to execute the technology projects of the corporation. Consequently, the crucial purpose of the dissertation is to understand whether or not the leaders with the required skills have a positive impact on the success of the project.

4. Methodology

Interpretivism is used as the research philosophy for the dissertation on the topic of the impact of leaders on technology implementation projects. The research philosophy has been

considered to be the overarching term that helps to connect to the knowledge of the character. The view of the particular leaders has been seen employing the interpretivism philosophy. The crucial information from the journal articles and books has been interpreted to find the results of the study. An inductive approach has been undertaken as the research approach for the dissertation. In the inductive approach, the relevant books and journal articles have been included in the research. In the research project, experimentation has been utilized to find the cause-and-effect relations between the leadership and the project's success. For instance, the experimentation strategy helps to determine whether or not the leaders have a positive impact on the success of the project. The qualitative secondary data has been employed as the methodological choice for the dissertation. The specific topics related to leadership and projects will be studied with the help of case studies and books. However, the challenges to using secondary data are combatted through the evaluation of the data quality. The research study has undertaken the cross-sectional time horizon where the journal articles and books are evaluated for the last five years. The single snapshot in a specific period is termed a cross-sectional time horizon (Alturki, 2021). Google Scholar search engine is implemented to search for various journal articles and books related to leaders and technology projects. The peer-reviewed journal articles have been utilized where crucial and relevant data are available about leadership and projects. The thematic analysis has been implemented to study the data and find important results. With the help of thematic analysis, the crucial themes of the project are formed to form the result of the project. The theoretical flexibility and coding procedure are important features of thematic analysis (Braun and Clarke, 2022). From the above analysis, it can be indicated that the research methodology of the project is critical for the proper undertaking of the study.

5. Discussion of Research Findings

5.1 Impact of Emotional Intelligence Traits on Project Success

The emotional intelligence traits of the leaders help in the achievement of the success of the project. The leaders have significant traits in the execution of the project where emotional intelligence skills are important in the organizational setting. Leaders who have high emotional intelligence encourage the team members to motivate and ensure commitment to the project (Doan, Nguyen, and Nguyen, 2020). In the scenario of project management, emotional intelligence plays a critical role in building efficient relations and motivating team members. Emotional intelligence is considered the capability to regulate and identify the emotions of others. The leaders of the project are accountable for preparing the detailed schedule to monitor

the project's progress. Corporations are required to hire emotionally intelligent leaders since they can control emotions and navigate the project requirements to achieve success. The effective and best project manager refuses to accept defeat but, explores the opportunities to excel (Lock, 2020). The findings for both the literature review and analysis section are similar and thereby indicate that emotionally intelligent leaders are more effective and important in achieving successful projects. Critically discussing the above fact, it can be indicated that emotionally intelligent leaders can control their emotions and can influence the employees to put their best efforts into achieving the purposes of the project.

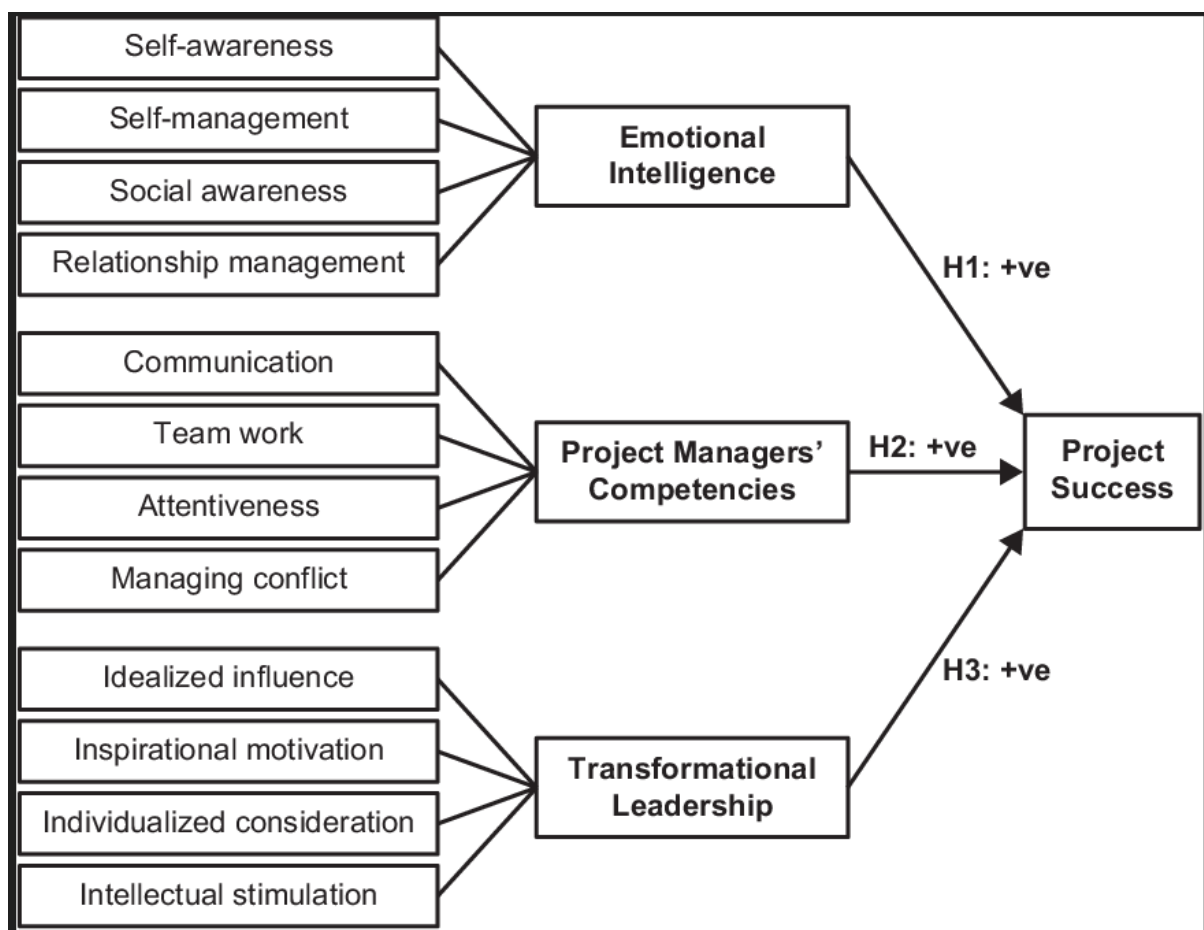


Figure 1: Factors Driving Project Success

(R. Makbool, 2017)

5.2 Impact of Project Management on Project's Success

The impact of better project management through crucial leaders is positive for the success of the project. The management of the projects is crucial for the leaders to have success in the results of the project. However, the leader demands of having technical skills are increasing but there are lesser supply of the skills. The excellent project leaders that are required in the

leading sectors are professional and construction services (El Khatib, Almtairi, and Al Qasemi, 2021). The project teams involve workers with different experiences who function together throughout the project. The leaders capable of developing communal relations in the corporations are experts in sharing knowledge and utilizing it in the success of the projects. However, leaders need to consider the different approaches in project management. The reasons are that the different approaches to project management can result in different and effective results. The findings of the study indicate that the agile approach in the management of the project has more degree of success in comparison to the traditional technique (Ciric Lalic, 2022). From the above analysis, it can be indicated that the impact of project management on the success of the project is positive and huge considering the results. The role of the leaders is important in the context of the project management. There is a positive correlation between the success of the project management and the project's success. The leaders have time management skills that help them to complete the projects on time, within the budget, and the forecasted work quality.

5.3 Leadership Traits in Project Success

The traits of the leaders are important in achieving the success of the project. The leaders are required to have hard and soft skills to be more successful in the delivery of the project. The kinds of projects depend on the success of the project management that relies on various other competencies (Podgórska and Pichlak, 2019). Leadership has an important role in achieving the success of project management, in the case of technical projects. Knowledge sharing is important for the leaders since the project data are shared among the leaders and help to achieve the best results. The important leadership qualities in the form of integrity, shared vision and multitasking are important to achieve success in the project. The project leaders would understand not only to use the right words but also to act as the best leader. The management of the project needs to stay focused on the distinct things. When planning the project, the leaders should have the capability to break down the tasks into manageable milestones and delegate the tasks. The leadership stance of the team leader is critical since this would aid them in inspiring their team members and ensuring success in the project (Fareed, Su and Awan, 2021). From the above analysis, it can be indicated that the traits of the leaders are crucial to achieving success in the project.

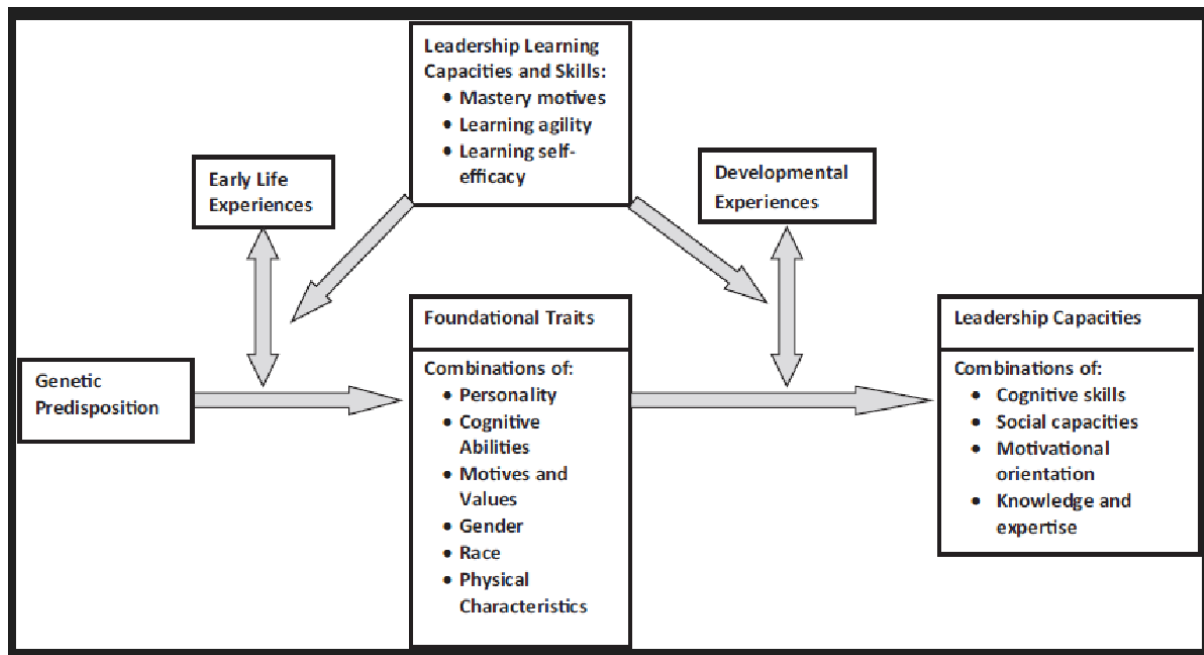


Figure 2: The Leadership Theoretical Framework

(D. Verawati, 2020)

The leaders when functioning in the project believe in achieving success in project management. However, more projects tend to fail due to ineffective execution of the leaders. The traits that are essential for the leader to achieve success in the projects are emotional intelligence, team building, and problem-solving. The leader's team-leading and personal qualities are essential to success in project management. However, the combination of the leadership traits and the support from the top executives would help in the achievement of success in the projects. For example, the top management of the company is critical to developing the plans since the leaders would have the skills to develop it in better conditions (Ali et al., 2021). Consequently, the traits of the leader are important along with the personalities of the leader who tend to provide authority on the project completion. For instance, conscientiousness and extraversion personalities are more triumphant in handling complex projects (Ameer et al., 2022). From the above analysis, it can be indicated the important traits of the leader are crucial for achieving success in the project delivery on time. In managing the projects on time, the commitment, and the personalities of the leader are critical in achieving project success.

5.4 Leadership Styles and Successful Projects

In the corporation, there are varied leadership style that helps to achieve success for the company. However, the style of leadership combines with the values and the beliefs of the

corporation to ensure to achieve success in doing projects. For instance, transformational and laissez-faire leadership are the two important styles of leadership that bring success in achieving better project results. With the help of the proper leadership style, the employees can be motivated and the team can be inspired to deliver the best efforts to achieve project success. Corporations are required to develop transformational leaders in project management through development, selection, and programs (Khan, Ali and Umar, 2019). The leaders set the schedule to monitor and control the project's progress. The behaviours and the leadership styles evidenced by better project leaders are critical since their actions influence the team members—the styles employed by the leaders, especially in the scenario of the technology project. The reason is that technical projects require particular skills in the form of knowledge about IT, cloud-based systems, and artificial intelligence. The leaders with their styles that have the required skills can be capable of employing them to derive the best results for the project. The successful project leadership style has several strengths that are managerial capabilities as well as emotional intelligence (Kariman and Kunos, 2020). The results of the study indicate that the leaders have the important skills employing their style to help them achieve the success of the project. The style of the leaders enables them to implement the skills and expertise to improve the project results. The team of the project has different kinds of employees with distinct personalities and thereby leaders have a role to play to influence the team members.

The project team can have members with varied skills, cultures, and beliefs. However, leading and understanding them is critical in the context of achieving project success. The leaders of the project need to have the skills and ideas to lead a team with varied cultural differences. The mixture of the transformational and transactional styles of leadership can aid in improving the results of project management. The changes in the corporation's performance rely on the skill sets of the transformational chief leader (Asbari, Santoso, and Prasetya, 2020). The transformational leaders employed by the project leader have an important and positive influence on the project's success. They have important characteristics that are idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation. These kinds of leaders have innovativeness, and critical thinking and employ non-traditional techniques to produce the best results for the project (Iqbal et al., 2021). The transformational leadership style has a positive approach toward the project as well as the project members. The transformational leadership technique is correlated with the employee's entrepreneurial conduct, workers' creativity, and employee adaptability. The above features of the leader help

them to deliver the best results. The above analysis indicates that transformational leaders have certain important qualities that help them to achieve the best results.

The project leaders have a huge role in responding quickly to the varied expectations of the customers. However, the results of the project are based on the plan quality and the economic value. The styles of leadership have an impact on the culture and they employ the expertise to influence the results of the corporation. The visionary and affiliative leadership styles are two important styles that impact the digital transformation within the company. However, the functioning styles of the varied leadership styles are different in the context of achieving project success. For instance, in the laissez-faire leadership style, the leader's functioning style would be to develop a robust team and then move away from the team (Bonkougou, Raisinghani and Idemudia, 2022). In simpler words, the leadership style provides freedom to the employees to function within the project team. Consequently, the results of the project improve if the team is encouraged to be creative and innovative. The time, scope, and cost are some of the important elements to measure the project's success. By implementing the four features of transformational leaders; intellectual stimulation, individualized consideration, as well as inspirational motivation, the leader can develop stronger emotions and develop mutual understanding within the team members. The project's purpose can be challenging and thereby leaders who set goals and have strong skills can help the team to achieve success. For instance, transformational leaders can set the purposes for the teams to achieve the challenging purposes of the project (Ali et al., 2021). From the above analysis, it can be indicated that the laissez-faire leadership style and transformational leadership style are the best styles of leadership that help to influence the project time, scope as well as cost.

5.5 Influence of Leaders on the Results of Technical Projects

Leaders have a huge influence on the results of technical projects since the expertise and skills needed in these kinds of projects are huge. In the technical project, the leaders require a wide range of skill sets including knowledge about project management software skill sets, kanban boards, and Gantt charts. Consequently, the leaders who are technically skilled and capable of handling the complexity of the project would be able to achieve success within the project. The leaders are required to have the technical skills to deal with the project triangle; cost, deadline, and scope. The leaders would be able to help the team's employees understand the varied elements of the project if they have the technical expertise and skills. The project's success relies on the leaders of the project (Henkel, Marion Jr and Bourdeau, 2019). In mega projects, the leaders need to deal with a wide variety of technical projects. The leaders have a positive

influence on the results of the technical projects if they have the essential skill sets. The competencies of the leaders are essential regarding delivering better project results. However, the leader's competencies are not enough, especially for technical projects. The strategic and technical skill sets are also essential for achieving project success. However, the technical and the strategic skills are different from each other in the context of the leadership competencies (Faisal et al., 2022). From the above analysis, it can be indicated that the leaders play a role in achieving positive results, especially for technical projects.

The knowledge of the leadership is essential in the context of technical and IT projects. The team of employees can find it hard to complete the project in time due to the complexity of the technical projects. In this scenario, the knowledge of the leaders is essential since the expertise and skills of the leader would aid them in completing the project on time. A wider range of technical depth is needed to have a better influence on IT projects. The technical management expertise comprised of extensive experience is helpful with the integration management (Vutula, 2021). The technical expertise is suited to the democratic leadership style since the style of leadership is inclusive. The leaders have innovative capabilities that help them to develop better ideas to be successful in the projects. For instance, innovative expertise is a crucial trait for democratic leaders (Sacavem, 2019). With the leadership capability, the team dynamics are also crucial to control in the scenario of the projects. The employees and the leaders exchange communication in regard to the positive influence on the innovative behaviour of the corporation. The positive interplay between the specific leaders and the workers is critical and contributes confidently to the results. The findings sum up the fact that the knowledge of the leaders is crucial in imparting them to the team members.

5.6 Influence of Project Team Dynamics on the Success of Project

The relationship dynamics within the team members have a better and more positive influence on the technical projects. For example, technical projects require leaders who are skilled and competent in handling the technological instruments. The competency explanation of team members of the project positively impacts the project's success (Juras, 2019).



Figure 3: Five keys to building effective teams

(Natasha Tamiru, 2023)

In the scenario of the project team, the leader's skills and expertise would be essential to communicate and solve the problems of conflict. The plan of the leader should be identifying the problem, testing the problem-solution fit, data collection, and then selecting the proper algorithm. Team dynamics is important in the context of ensuring them they know each other and collaborate effectively to improve the project's success. In order to achieve the success of the project, the dynamics of the team are essential since the team members would communicate and execute the project tasks collaboratively. The findings sum up the fact that team dynamics is the lifeblood of the company, intricately integrated into the facet of the presence. Team building aims to enhance the dynamics of the project team and enhance team integration to increase the effectiveness of the team (Pollack and Matous, 2019). The above findings indicate the fact that leaders would have the chance to be successful if they form the team more effectively and control them to achieve success.

6. Reflection on Dissertation Procedure

The reflection on my dissertation procedure has been done with the help of Gibb's Reflective Cycle model. The model is relevant and useful for reflecting on the experience. The model

comprises six stages description, feelings, evaluation, analysis, conclusion, and action plan. Reflective practice refers to the plan promoted in the form of a way to improve professional performance and develop expertise (Miller, Ford and Yang, 2020). Consequently, Gibbs's reflective cycle model would help me to reflect on my experience.

I had an excellent experience in doing the dissertation since I got to improve my knowledge base on varied concepts. Upon doing the dissertation on the topic of leadership and technology projects, I learned about the leadership styles and the different kinds of projects that are relevant to the companies. I have done the dissertation on the university and employed the resources to an excellent extent. The results of the dissertation were excellent due to the potential outcomes and the ways it can employed for future studies. I was there to do the dissertation including the three sections; introduction, literature review, methodology, and analysis and findings. Dealing with the impact of reflection on the performance, the accustomed people were better at performing their professional activity (Cattaneo. and Motta, 2021).

I felt happy upon doing the dissertation since I explored various concepts and learned from them. Before beginning the dissertation process, I was nervous and feared that I would not be capable of doing the research related to the dissertation. However, I enjoyed and was enthusiastic to do the dissertation since I encountered a variety of concepts. During the situation, I thought about doing my research processes right since I knew the importance of the task and my need to execute the task properly. I have overall felt happy experiencing doing the dissertation. Happiness depends on achieving immediate pleasure, during the absence of undesirable effects (Rastelli et al., 2021).

The things that I did well in doing a dissertation on the topic were the research process, and writing good research aims and objectives. However, the things that did not go well for me were conducting the methodology and studying the results of the research. The good things about the experience were the research on the importance of leadership in technology projects, and doing the themes when conducting the literature review. However, the bad things about the experience were conducting certain parts of the methodology and doing the analysis and findings section. The methods section tends to be the easier section of the paper and can be written down when the experimentation is not finished (Eldawlatly and Meo, 2019). I made the situation better by reading more about the differences between qualitative and quantitative methodology, the various data collection methods, and data analysis methods.

The reason that my procedure of research, writing research aims and objectives as well as writing themes during the literature review were my critical thinking capability and innovative skills. In higher education, the literature review seems to be unique in focusing on the student's relations to creative writing (Waller and Waller 2023). The reason that the methodology section and the analysis and findings section did not go well for me was the fact of my lesser knowledge regarding the sections. I did not know the ways to do the Gantt Chart which hindered my ability to do the findings section. With the help of the academic literature, I have developed some knowledge about the Gantt chart that helped me to set the deadlines to improve my dissertation process.

I have learned about the concept of various styles of leadership, the nature of the technology projects, and the importance of learning the technical skills to improve leadership quality. This could be a more positive circumstance for me if I had analysed the findings in a better way. I could have read the findings from the literature review and could have critically done the analysis. The skills or expertise that are needed to be able to research the dissertation better are searching information, time management, problem-solving, and communication capability. I could have learned the above skills and researched more about the Gantt chart in order to complete the project in time.

6.1 Recommendation or Action Plan

If I had to do a similar dissertation again, would have conducted in-depth research, sought feedback, and pointed out the value of the research. In-depth research is among the most relevant forms of collecting data in qualitative research. The telephone interviews have a similar richness in data compared to the in-person interviews (Azad et al., 2021). Would have invested more time and effort to do the literature review. I would have gathered more relevant sources and researched the studies from the library. I would have considered more about the history of the topic in order to have relevant data. I would take careful notice about the sources and read the abstract to develop the themes more effectively. I would have sought advice from the advisor through the research procedure. Consequently, I would be able to receive more valued feedback. support along with the relevant sources. When I would have made the final revisions, I would have sought feedback from the advisors. Proactively seeking feedback is argued to be central to learning (Crans et al., 2022). I would also research more on the methodology section since this would help me know about the differences between qualitative and quantitative sources. I would have more concentrated on the methodology section which would have helped me to do each element of the research methods. Upon doing my

methodology section of the research, I would have restated the thesis problem, explained the approach to be selected, explained the uncommon methodology to be used, and justified the methodological choices. If I had to do the methodology section of the dissertation, I would have provided a detailed analysis of the experimentation, the strategy to be used, and the time horizon in the form of when the dissertation will finish.

Summary

The findings sum up the fact that leadership plays a positive role in the implementation of technical projects. However, the impact can differ based on the styles of leadership. For instance, the democratic leadership style provides freedom to the employees to function in a team and achieve the project purpose effectively. The emotional intelligence traits of the leader are crucial since controlling emotions within the team setting helps the employees to calmly operate the tasks of the projects.

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Appendix

Stage 2: Literature Review

2.1 Project Management and Team

Project management includes the implementation of skills, procedures, knowledge as well as methodologies to attain the project objectives. Since more public and private organizations implement projects, the requirement for efficient project managers tends to increase. However, the gap between the skilled project managers' demand and the supply of qualified personnel has been increasing. The crucial reasons for the increased demand for project leaders include higher jobs that need job-oriented skills as well as higher attrition rates in specific industries. Some leading sectors that need project leaders are construction, utilities, and professional services (El Khatib, Almtairi and Al Qasemi, 2021). There is a need for organizations to hire emotionally intelligent project leaders to ensure success in project management. Good project management could deliver projects within the time, satisfy the clients, and result in cost savings. An efficient project manager does not accept defeat but explores every opportunity to excel (Lock, 2020). The project teams tend to include workers with distinct knowledge and experience who function together in the lifespan of the project. The temporary features of the projects could impose a barricade to learning if the capabilities and the specific opportunities are not controlled properly (Dasí et al., 2021). Consequently, efficient project management via project leaders is needed to execute the project tasks efficiently. However, the current literature does not provide an understanding of the emotional intelligence tests in the hiring procedure of project managers with a level or pass. The importance of the activities in increasing the awareness of the emotional intelligence of the person needs to be studied for further development.

2.2 Traits of Leaders in Project Success

The leaders need to have several traits to achieve success within a project. For instance, leaders need both soft and hard skills in order to be successful in project delivery. Emotional as well as managerial skills are needed for a leader to have success in project management. Based on the kinds of projects, its success relies on the other competencies (Podgórska and Pichlak, 2019). To increase the probability of succeeding in project management, project managers need to have an idea of the leadership competencies that are needed and the type of personality traits that complement the competencies. Conscientiousness, extraversion, and professional commitment are some of the individual traits of a leader needed to be successful in project management. The Project managers can develop their leadership skills by motivating as well as inspiring the teams; communication and influencing skills. Observation is a powerful instrument to develop leadership skills. For instance, the project managers can expand their network to see efficient leaders in the company. Conscientious leaders can control the environment and thereby their team tends to achieve success. However, extraversion persons tend to be more creative and their personality is dynamic. The commitment of the leaders in terms of their professions is crucial in achieving project success. Extraversion and conscientiousness personalities tend to be more successful in handling projects (Ameer et al., 2022). The personalities and the commitment of the leaders are crucial in efficient project management.

Project success has been believed to be crucial in project management. However, more than 80% of the projects tend to fail as a result of the undesirable execution of the leaders. The specific managers with the combination of emotional intelligence as well as intellectual intelligence are highly successful compared to those with better intellectual intelligence but lesser emotional intelligence. Several efficient project managers have agreed that Intellectual Quotient (IQ) is crucial to achieving excellent performance. The project leaders' personal as well as team-leading qualities are crucial factors in achieving success in project management. The leadership position of the team manager is crucial since this would help them motivate their team members and ensure project success (Fareed, Su and Awan, 2021). The top management support along with the crucial leadership traits are crucial in different project phases. For instance, the top management of an organization is crucial to developing strategies since they would have expertise in the prevailing conditions of the organization (Ali, et al., 2021). From the above analysis, it can be indicated that the team-leading qualities and intelligent quotient are crucial in delivering projects successfully. However, the person needs

to be provided with a leadership position so that they can deliver their skills in project management. Future research needs to consider the impact of leadership on the distinct knowledge areas of project management within the team-building dimensions.

2.3 Leadership Style and Project Success

The leadership style has a crucial role to play in the success of the projects. Some of the leadership styles that have a huge influence on project leadership are transformational, and laissez-faire. The leaders need the capabilities to be skilled to lead the specific followers that would help them accomplish the project within time. Organizations need to build transformational leaders in project management via distinct ways like leadership development programs as well as selections (Khan, Ali and Umar, 2019). The project leaders are responsible for preparing a detailed schedule to control and monitor the progress of the project. The styles of leadership and the behaviours evidenced by the project leaders are crucial since their actions influence the behaviour of the team members. Successful project leaders tend to possess various strengths in the form of managerial capabilities and emotional intelligence (Kariman and Kunos, 2020). The skills are utilized in dealing with projects resulting efficiency and success of the project. For instance, a team consists of various members with different personalities and emotions. A leader with emotional intelligence skills can understand the emotions of the team which would help in achieving project success. In simpler words, leadership has a positive influence on the performance of project management. However, leaders can encounter challenges in the form of handling employees from different cultures. In the scenario, the leaders employ strategies to support the culture of change and improve the production of ideas within the company (Karakose, Polat and Papadakis, 2021). The project leaders need to have an idea of leading a worldwide team comprised of cultural differences. The worldwide understanding of leadership in the context of culture encompasses several aspects; language, beliefs, and values. The project teams include distinct members with a mixture of skills and capabilities and thereby require the highest forms of communication. Consequently, the leaders have the power to communicate with the team members regarding the project activities and thereby achieve success. The combination of the transformational as well as transactional leadership styles can help to improve the performance of project management. From the above analysis, it can be indicated that the leadership style is crucial to achieving success in project management. Despite the current study providing important findings in regard to digital leadership roles, in-depth research on leadership roles as well as technology needs to be conducted with the help of a large sample.

2.4 Transformational Leadership Style and Project Success

Transformational leaders refer to leaders who can transform followers by encouraging them to have higher integrity by putting their interests and increasing consciousness of specific problems. The change in the performance of the organizations depends upon the skills of transformational leaders (Asbari, Santoso, and Prasetya, 2020). The project manager's transformational leadership style has a positive and significant influence on the success of the project. Some of the important characteristics of transformational leadership are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. They can communicate the compelling objectives of the project that would help the team to achieve the goal. The innovativeness, critical thinking, and non-traditional methods implemented by the transformational leaders would help them to achieve project success (Iqbal et al., 2021). From the above analysis, it can be indicated that the transformational approach toward the project serves as a positive figure for the project members. When the leaders of the project undertake the transformational leadership style, the technical project is more likely to achieve a positive result.

The scope, time, and cost are some of the crucial elements to measure the success of the project. Through the four attributes of transformational leaders; intellectual stimulation, idealized influence, individualized considerations, and inspirational motivation, the leaders achieve success of a project. For instance, transformational leaders show stronger emotions and build mutual understanding among the team members in a project setting. The leader can communicate the mission of the project to their members in ways that encourage them to achieve the goals quickly. The transformational leadership style is linked positively with the worker's entrepreneurial behaviour, workers creativity, employee adaptability, and employee retention. The above features of leadership are more probable to deliver positive results. Transformational leaders play an excellent role in positive change and strategic repositioning as well as stakeholder perspectives who contribute to the successful technical project. In simpler words, transformational leaders set goals for the team members to have demanding project purposes (Ali et al., 2021). The evaluation and the study of the project success criteria are centred on the achievement of the specific targets in the form of cost and time. The transformational leadership style has been devoted to achieving corporate objectives and structuring teams at the projects (Ali and Rasheed, 2021). From the above analysis, it can be indicated that transformational leaders have certain characteristics that help them achieve success in their projects.

2.5 Impact of Leaders on Technical Projects Results

In the context of technological projects, the leaders need to have technical knowledge about ways to proceed with the project. Project management is implementing the technical skill sets of executing the project work with the help of techniques, and knowledge such as scheduling and planning. Undeniably, the project leader needs to have the technical skill sets in order to deal with the usual triangle of deadline, cost, and scope to achieve the purposes and goals of the project. The success of the project depends on the project leader (Henkel, Marion Jr and Bourdeau, 2019). The mega projects include technical expertise and skills and thereby leaders are crucial in providing better results. The mega projects include technical projects that are hugely invested in. The technical and strategic skill sets are distinct from the leadership competencies (Faisal et al., 2022). However, leaders need to have technical skill sets to deliver better results. From the above analysis, it can be indicated that the leaders have a positive influence on the results of technical projects. The leadership style in the case of an AI project includes the empowerment of a team, delegating tasks, and encouraging innovation. In a technical project, the team members need to have the best knowledge to complete the project. Consequently, leaders need to empower the team as well as provide technical inputs to complete a technical project. The strategy of the leader would be to identify the problem, test the problem-solution fit, prepare the data, select the right algorithm, and deploy the project.

In the case of technical and IT projects, leadership knowledge is crucial since the expertise of the leaders would help them to complete the project. The leader needs to have technical depth to have a better effect on IT projects. Technical management experts with having huge of experience can be helpful with integration management (Vutula, 2021). However technical expertise is best suited for a democratic leadership style. The reason is that the leadership style is inclusive. The personalities of the democratic leaders are important in project success. Innovative capabilities are an important trait of democratic leaders (Sacavem, 2019). The other important traits of a democratic leader include embracing teamwork, being flexible, and having a better decision system. For instance, democratic leaders show teamwork is essential for better project management.

2.6 Leader- Employee Exchange in Technical Projects

The leader-employee exchange refers to the interaction of the leaders and the employees in the organization setting. Increased leader-employee exchange within an organization is believed to have a positive influence on the organization performance. Leader-employee exchange can

benefit IT projects since quick technological changes need more interaction between the IT employees. The leader-employee exchange has a positive effect on the innovative behaviour of the organization. The positive interaction between the leaders and the employees is essential and contributes positively to the results. This is especially important in project-based companies where each project is innovative and needs the exchange of ideas and knowledge (Mustafa et al., 2022). Shared leadership behaviour is crucial for projects based on IT. The shared leaders increase project success through knowledge sharing as well as cohesion (Imam and Zaheer, 2021). Leader-employee exchange in the context of shared leadership is crucial for success in project management.

Summary

Leadership plays an important role in technology projects since technical projects need varied skills and expertise to successfully execute them. Project success is crucial in project management where leaders provide success in completing and delivering better project results. The stronger emotions shown by the leader and the capability to lead help them to successfully deliver better project results.

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Stage 3: Method of Analysis

The research methodology begins with a delineation of the philosophy, selecting approaches, strategies, and methods as well as explaining the time horizon. The research onion model has been used to construct the research methodology. The model delivers an explanation of the crucial layers or phases that need to be accomplished to develop an efficient methodology (Melnikovas, 2018). The phases of methodology are described below:

3.1 Research Philosophy

The research philosophy explains the research, helps to simplify the used techniques as well as understand the expectations supporting the research methods (Abdelhakim, 2021). In this particular research, interpretivism has been utilized as the philosophy to execute the dissertation on the research topic. The research philosophy is considered the overarching term connected to the development and knowledge of the character in the context of the research. The particular dissertation implements the interpretivism philosophy that shows ways to view the role of leaders in implementing technology projects. There is development of some assumptions (for instance, high-skilled leaders needed for technology projects) related to the topic. The dissertation on the research topic is completed based on the assumptions. The journal articles, books, and information from the websites have been interpreted from a variety of viewpoints. Interpretivism is founded on the principles of studying behaviour since this is seen naturally. The purpose of interpretivism is to have various understandings and explanations of social life from distinct human views. Ontological and epistemology are two important research methodologies where the components of the research procedure include research approach and research strategy (Al-Ababneh, 2020). From the above analysis, it can be indicated that interpretivism is used in the dissertation to interpret important information present in previously published journal articles and books.

3.2 Research Approach

The various approaches to the theory development could be implied through the research philosophy on the previous level as well as include deduction, induction, and abduction (Melnikovas, 2018). An inductive approach is undertaken to research the role of leadership in the project's success. Inductive reasoning is the opposite of deductive reasoning where the former approach begins with particular observations and moves towards broader generalizations and theories. In the inductive approach, there is a collection of particular data and a determination of the data patterns to develop a theory in order to explain the patterns.

The inductive approach begins with the observations set and then develops a general proposition set (Alturki, 2021). In the context of the particular research, the observations are formed based on the role of the leaders in the project's success and then form a usual belief about the leadership role. The subjective inductive approach is based on transforming the data to the theory (Varpio et al., 2020). From the above analysis, it can be indicated that the inductive approach would help in building a proper link between the research objectives (determining the leadership traits that aid in the execution of technology projects) and the summary of the findings extracted from the data.

3.3 Research Strategy

The particular research philosophy impacts several kinds of research plans and inquiries for which various investigation aims to provide the answer. In determining the research strategy, numerous features need to be considered, for instance, the kinds of data and the resources needed. In the context of the study, experimentation would be implemented as the research strategy. Experimentation research has a longer tradition in technology, medicine, and education. The purpose of the experimental research plan is to aid the research in building a cause-effect relationship that has more credibility (Alturki, 2021). In the particular research study, the impact of leadership (cause) on project management (effect) has been determined with the help of an experimental method. Experimental designs have two important features; manipulation of the independent variables as well as random distribution of distinct subjects (Miller, Smith and Pugatch, 2020). The experimental technique refers to the systemic and scientific technique where there is the implementation of manipulated and controlled testing to achieve an understanding of the causal process. This is the finest strategy to implement in the particular context since:

- There is the determination of whether the cause or the role of the leader precedes the influence or investigates the impact of the changing conditions.
- The causal relationship is seen between the role of the leader and the project management.
- The degree of the correlation between the role of the leaders and the project management is huge.

In the context of the dissertation based on the topic, the experimental qualitative research is in the form of observation as well as analysis of the texts.

3.4 Methodological Choice

The secondary qualitative research approach is the particular methodology implemented for the dissertation. Qualitative studies have been focused on words, as well as undertaking techniques for collecting various data that seem to be non-quantifiable. The data required is qualitative and would be collected based on varied details. The 'quality' of qualitative research can be evaluated through the criteria known as 'trustworthiness' (Priya, 2020). In order to explore the research questions and topics, the study would consider the case studies, books, and journal articles published previously. Qualitative data related to the role of the leader and project management has been provided. The qualitative data is descriptive, and interpretation based related to the language. The research choices include mono-methods and multiple methods. The multiple-method section consists of multi-methods and mixed methods. Multi-method qualitative studies are utilized for the research study that help to determine a set of results related to the role of the leader. Qualitative research is significant to internal and external generalizations, but the methods and logic are distinct for the two kinds (Maxwell, 2021). From the above analysis, it can be indicated that qualitative research is utilized as the research methodology to conduct the study on the topic. In the secondary qualitative research approach, the previously published articles are taken from Google Scholar to establish a connection between the research objectives and the findings.

3.5 Reliability and Validity

Validity and reliability are considered the research terms that are applied through the scientific literature to evaluate several research elements (Chetwynd, 2022). The challenges of using secondary data sources in the dissertation topic are combatted by evaluating the quality of data sources and customization of data to the needs. The validity of the data is executed by verifying that the data conforms to the defined rules. The peer-reviewed journal articles are selected that are more reliable than the others.

3.6 Ethical Considerations

In using the secondary data for the dissertation on the research topic, adherence to the laws and rules is crucial for the various copyrights. For example, the reports and the articles need to have permits and licenses. The other ethical consideration needed in the context of using secondary data is the provenance of the data, social profiling, and whether or not the research data influences a particular community.

3.7 Time Horizon

The time horizon is referred to as the particular period encompassed by the study alongside the collection of data and time and the related study was conducted. The single snapshot in a particular period is termed the cross-sectional time horizon whereas the longitudinal time horizon has numerous snapshots over the period (Alturki, 2021). The cross-sectional time horizon has been selected for the research study where the time period is taken between 2019-2024. The journal articles, books, and information from the websites published in the last five years have been utilized in the particular dissertation. The data are authentic and reliable and taken from peer-reviewed articles. Peer review is considered an ever-present component of scholarly experimentation quality assessment and assurance (Tennant and Ross-Hellauer, 2020). From the above analysis, it can be indicated that scholarly peer-reviewed resources have been taken from the last five years in order to conduct the dissertation. The particularly defined time frame would help in achieving precise findings compared to that of an open-ended time frame. In the research study, the defined time frame helps in finding the important characteristics, and the role of leaders in the success of technology projects.

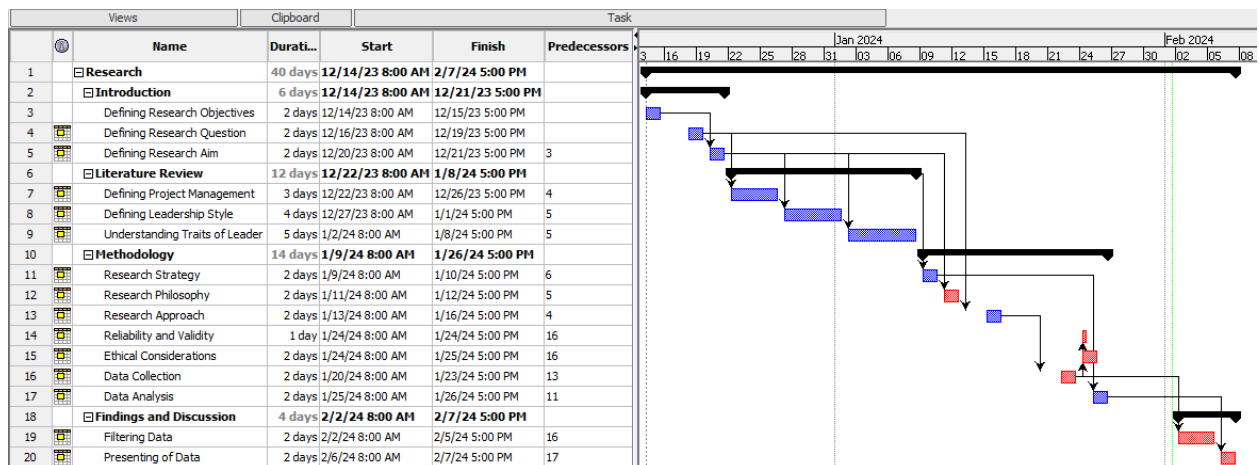


Fig 1: Time Period of Dissertation

(Source: Self Made)

3.8 Data Collection

The secondary data has been collected from internet sources, accessing the Google Scholar search engine, and case study references concerning the projects related to technology implementation. The scholarly works related to strategy management, leadership, and project

management have been collected using the Google Scholar search engine. The collection of data from Google Scholar has been performed by implementing technologies (Rahmatullah and Gunawan, 2020). The Google Scholar search engine consists of a variety of information; books, and journal articles from peer-reviewed sources. The peer-reviewed journal articles and other sources have been collected to conduct the dissertation on the research topic. The peer-reviewed articles related to crucial leadership behaviour's as well as practices that function well in technology implementation projects have been collected to have a better view of the research study. The keywords in the form of 'leadership', 'technology' 'projects', and 'transformational' have been utilized to find the peer-reviewed articles related to the research topic.

3.9 Data Analysis

Secondary qualitative data analysis is a powerful instrument through which important insights can be gained about the data (Cheong et al., 2023). Thematic analysis is utilized as the data analysis method to find important insights about the role of leaders in the success of the projects. The thematic analysis method has some important features; theoretical flexibility, the process of coding as well as development of the theme, and the probability of the inductive orientations to the study (Braun and Clarke, 2022). The qualitative data related to the leadership style, knowledge of projects, and the impact of the leaders is identified, studied, and interpreted with the help of thematic research. In interpreting the data, familiarity with the information is essential and then the initial codes are generated. The themes are searched, reviewed, and then defined to write the analysis in detail. The analysis is implemented in the texts related to the leadership and the projects. The common themes are identified by exploring the various texts from journal articles, books, and other sources and thereby a better understanding of the research topic is established.

Summary

The interpretivism research philosophy has been utilized to determine the role of the leaders in technical projects. However, experimentation is used as the research strategy in the dissertation on the research topic. The data in regard to the role of leaders and technical projects are collected through Google Scholar. The thematic analysis has been used to analyze the data that has theoretical flexibility.

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Stage 4: Analysis & Findings

4.1 Emotional Intelligence Trait and Project Success

4.1.1 Findings

Leadership is considered an important trait in successfully executing a project. Emotional intelligence is the mixture of four sets of emotion-related skills described as self-emotional appraisal, others emotional appraisal, regulation of emotions, and use of emotions. In the projects, the leaders with the emotional intelligence skills approach the leadership responsibilities from a distinct perspective compared to the authoritarian leaders. The capabilities of emotional intelligence leaders are linked to how work is performed, which plays a crucial role in improving the performance of project leaders. Doan, Nguyen, and Nguyen (2020) state that higher emotional intelligence inspires the project leaders to inspire the team members, creating motivation to work and commitment to the project. There has been a growing consciousness in regard to the positive influences of emotional intelligence on project management. The managers who have a higher level of EI can positively influence the performance of the project (Camplisson. and Cormican, 2023). However, companies need help to leverage as well as harness the potential of emotional intelligence. From the above analysis, it can be found that emotionally intelligent leaders are capable of having a stronger influence on the project performance thereby achieving success.

4.1.2 Analysis

The literature review details the importance of hiring emotionally intelligent leaders in the workplace to ensure the success of the project. The review indicates that the success of the project can be achieved through hiring emotionally intelligent leaders. Similar to the literature review, the findings also recommend that strong emotionally intelligent leaders inspire the team members and motivate them to perform better in the settings of the organization. Consequently, it can be derived that there is a similarity between the findings and the literature review of the research.

4.2 Influence of Better Project Management on Project Success; Mediated by Knowledge Areas

4.2.1 Findings

Project Management Success (PMS) refers to the completion of a particular project within the budget, and meeting the needs of the customer in regard to the result of the project. The social

capital's impact on the PMS is through the capability to propagate and enhance the sharing, acquisition as well as exploitation of knowledge between participants and non-participants. The reason is that sharing, acquisition, as well as knowledge exploitation, are the social processes that are enhanced by the development of the social relations among the individuals. The leaders who are capable of developing the social relations in the company are competent to share knowledge and utilize it in the project's success. Knowledge management (KM) indicates the efforts developed and the procedures implemented to share, acquire, and transfer information in the company. KM procedures in project settings are crucial due to their probability of improving the competencies of the workers and enabling successful project management practices (Amoako-Gyampah et al., 2021). The different instruments used by the leaders to have success in project management are hybrid, agile, and traditional. Ciric Lalic et al., (2022) state that the agile approach in project management has a higher degree of success compared to the traditional approach due to its influence on the team as well as the preparation of the future employee. The above findings indicate that better project management with the help of leaders' knowledge of various elements of the project helps in achieving the success of the project.

4.2.2 Analysis

The research is subjected to understanding the role of the leaders in the technology projects that have more importance in recent times. The literature review indicates that better project management helps to deliver the projects on time and satisfy the customers. The findings also indicate the same in terms of the significance of better project management to deliver the projects on time. In the literature review, the leadership feature that has been indicated is the emotional and intellectually intelligent leader contributes to the project's success in project management. However, the findings elaborate on the aspect of knowledge of the project leaders and their capability to contribute to the success of the project. Consequently, the findings and the analysis of the features of better project management affecting project success are similar.

4.3 Roles of the Leader in Project Management

4.3.1 Findings

Leadership has a crucial role to play in the success of project management, especially in the scenario of technical projects. Knowledge leadership has a critical role to play in efficient project completion and thereby project success. In an organization, knowledge sharing in terms of the project data is critical for success. However, the knowledge-hiding behaviour of the

employees is a cause of concern for the organization due to the potential data loss that can happen in the form of information and data. Mubarak et al., (2023) indicate that the projects have complex procedures and huge bundles of data and information. Consequently, the right leadership style would pave the way to implement the projects with the help of relevant data. However, the lack of knowledge of leadership can result in a lack of understanding of the processes, leading to project failure. Since information technology (IT) initiatives are sophisticated as well as analytical, project executives need to pool crucial insights for future projects. Whyte et al., (2022) indicate that technological change needs project leaders to ensure ethical decisions in regard to ways to implement innovation in the projects. The types of technology projects include artificial intelligence, product platforms, and blockchain. The above findings indicate that technological projects need a leader who has clarity in role and knowledge of various kinds of technologies in order to succeed in executing the project.

3.3.2 Analysis

The role of the leader is crucial in any project of the organization, especially in technical projects where the leader should have the relevant expertise to perform. The literature review indicates that the leaders should have the idea of leading the team provided the role of executing the technical project. The project teams led by the leader need to have various skills and expertise to deliver the projects on time. In simpler words, the literature review indicated that leaders need to have several skills to lead the project team. However, the findings are more detailed and different compared to the literature review. In the findings, the role of leaders, knowledge leadership, and the technical project features are studied and provided in detail. For instance, technical projects are said to be critical and require leaders who are skilled and expert. Upon studying the literature review and the findings, it can be indicated that there is dissimilarity in the sections revealing that the findings do not match the literature review.

Reviewed Articles		Leadership Scope				Project Type					Research Methods				Research Objectives			
	Publication Year	Knowledge	Project management	Leadership Styles	Emotional Intelligence	Technology	Strategic	Service	Operational	General	Case study	Conceptual	Survey	Modelling	Explanatory	Exploratory	Descriptive	Predictive
Amoako-Gyampah <i>et al.</i>	2021		X			X							X			X		
Bonkounou, Raisinghani, and Idemudia	2022	X	X	X		X					X		X		X			
Camplisson, and Cormican	2023	X		X		X			X			X	X		X			
Ciric Lalic <i>et al.</i>	2022	X	X	X	X		X				X		X		X		X	
Doan, Nguye, and Nguyen	2020	X						X			X		X		X			
Juras	2019	X				X						X				X		

Mubarak <i>et al.</i>	2023		X	X		X						X			X			
Pollackand Matous	2019	X	X			X						X			X			
Renzi	2020		X	X		X							X				X	
Whyte <i>et al.</i>	2020	X	X		X	X					X				X			
Total number of articles	10	7	7	5	2	8	1	1	1	0	4	4	6	0	1	2	2	0

Table 1: Summary of the article and its leadership source, research methods, industry sectors, and research objectives

4.4 Leadership Style and Impact on Project Time and Scope

4.4.1 Findings

Project managers have a role to play in responding quickly and acting to the varying expectations of the clients. The project results are computed on the basis of the quality of the financial plan as well as economic value. The leadership styles influence the culture and the ways of using the expertise in the company and thereby affect company results. The ‘affiliative’ and ‘visionary’ leadership are the crucial factors that influence the particular digital transformation of the corporation. However, transformational leaders motivate their followers to be capable of attaining their objectives by improving the awareness level through modification of self-esteem as well as values. The project leaders would apply the transactional style of leadership that enables contingent rewards in the context of non-charity venues. In project management, the transactional leadership style provides an emphasis on the leader by contingency reward and exception. Bonkougou, Raisinghani, and Idemudia (2022) state that in the laissez-faire leadership style, the crucial element to be successful in the project is to develop a strong team and then step away from it. The project implementation tends to thrive

when there seems to be a harmonious integration among the project objectives and leadership style. The project implementation considers the interaction of teams under various leadership. For instance, the leaders have the responsibility to interact with the human resources compared to the resources in the company. The distinct leadership styles have different benefits that they provide to specific projects (Renzi, 2020). The above findings indicate that the various leadership styles have different influences on the project.

3.4.2 Analysis

The base of the study is to study whether the transformational leadership style can use various traits to have a huge influence during the implementation of the project. The findings from the varied literature have established the hypothesis that the leadership style comprised of various traits can be used to complete the project on time and positively impact stakeholders. The usual findings demonstrate that the leadership style can be several and each style has benefits and drawbacks in affecting the completion of the project. In the literature review findings, it can be indicated that transformational leaders build mutual understanding along with stronger emotions in order to understand the team employees in the project setting. Compared to the literature review findings, the usual findings indicate the effect of various kinds of leadership styles on time and scope. Visionary leadership is crucial to the success of the project and in influencing the scope. The distinct leadership style influences different results and in this respect, the leadership style influences the team cohesion as well as project implementation. From the above analysis, it can be indicated that the findings of the literature review and the usual findings are dissimilar in the sense that the above findings are more detailed and reflect the benefits of different leadership styles on the project's success.

Serial no.	Author	Codes	Theme
1.	Ø Doan, Nguyen, and Nguyen, 2020 Ø Camplisson. and Cormican, 2023	Emotional intelligence, project success, project leaders, team members, scale development, project manager	Emotional Intelligence Trait and Project Success
2.	Ø Amoako-Gyampah et al., 2021 Ø Ciric Lalic et al., 2022	Project management, knowledge exploitation, and social relations, project success	Influence of Better Project Management on Project Success; Mediated by Knowledge Areas
3.	Ø Mubarak et al., 2023 Ø Whyte et al., 2022	Knowledge leadership, project management, information technology (IT) initiatives, product platforms	Roles of the Leader in Project Management
4.	Ø Bonkounou, Raisinghani and Idemudia, 2022 Ø Renzi, 2020	Leadership style, project time, scope, and digital transformation	Leadership Style and Impact on Project Time and Scope
5.	Ø Pollack and Matous, 2019 Ø Juras, 2019	Project team, technical project, teamwork and communication	Impact of Project Team Dynamics on Communication of Technical Projects

Table 2: Themes as well as codes with the respective authors

4.5 Impact of Project Team Dynamics on Communication of Technical Projects

4.5.1 Findings

The dynamics or the relations between the members of the team have a positive effect on the technical projects. The competencies in project-based work have become important in the recent business world. For instance, technical projects need leaders who are competent in handling technological tools. Consequently, it will reflect in the team dynamics in the form of innovation and productivity. The competency description of the team members of the project positively influences the success of the project (Juras, 2019). Teamwork and communication are crucial determinants of whether or not the project will be successfully delivered. A high-performing team can be the crucial feature of a high-performing project. The purpose of team building is to improve the dynamics of the team and increase team integration to improve the team's effectiveness (Pollack and Matous, 2019). The above findings indicate that the project team dynamics are crucial in project success, especially for technical projects where the employees need to be coordinated in order to complete the project.

4.5.2 Analysis

The base of the research is to determine the influence of the project dynamics on communicating about the technical projects. In the literature review findings, the leaders must have the technical knowledge of how to proceed with the project. The findings state that the project leader is required to have the technical skills to deal with the scope and cost of the project. Similar to the literature review findings, the usual findings recommend that the project team dynamics are crucial in regard to communicating about the technical projects. The leaders would thereby know the technical skill sets to communicate about it to the team. The literature review findings and the usual findings are similar to each other since both findings indicate that the leaders should know about the project to affect the project dynamics and thereby success of the project.

Summary

Most of the sections of the literature review and the findings are similar in terms of the base of the research. For instance, emotionally intelligent leaders are crucial to success in projects, and thereby most companies should try to hire emotionally intelligent leaders. Better project management helps to achieve excellent success in the project. The role of the leaders is crucial to the success of the project. However, there is a need for the leaders to have the technical knowledge in order to succeed in the project results.

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