AN INTERNSHIP REPORT

ON

PROJECT MANAGEMENT OF POWER PROJECT CONTROLS LTD.

Submitted To:

Department of Business Administration

Faculty of Business

Sonargaon University (SU)

Submitted By:

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ID: BBA2103024098

Program: BBA

Major: HRM

Department of Business Administration

Faculty of Business

Sonargaon University (SU)

Submitted for the partial fulfillment of the degree of Bachelor of Business Administration.

Date of Submission: 30th August, 2025

AN INTERNSHIP REPORT

ON

PROJECT MANAGEMENT OF POWER AND PROJECT CONTROLS LTD.

Supervised by:

Md. Mostakin

Lecturer

Department of Business Administration

Faculty of Business

Sonargaon University (SU)

Submitted By:

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ID: BBA2103024098

Program: BBA (Major in HRM)

Bachelor of Business Administration

Sonargaon University (SU)

Submitted for the partial fulfillment of the degree of Bachelor of Business Administration

Date of Submission: 30th August, 2025

Letter of Transmittal

August 30, 2025

To,

Md. Mostakin

Lecturer

Department of Business Administration

Sonargaon University (SU)

Subject: Submission of Internship Report on "Project Management of Power & Project Controls Ltd."

Dear Sir,

With due respect, I am pleased to submit my internship report titled "Project Management of Power & Project Controls Ltd.". This report is an essential part of my BBA degree requirements, and I had the privilege of completing my internship under your guidance. This report reflects the practical aspects and management practices applied in the field of project management. I have made an effort to include relevant details while keeping the report concise.

I kindly request you to accept this report for evaluation. Your valuable feedback will be highly appreciated. Thank you for your time and consideration.

Yours sincerely,

Sonjoy Choudory

ID: BBA2103024098

Program: BBA

Major: HRM

Department of Business Administration

Sonargaon University (SU)

Certificate of Supervisor

I hereby confirm that the internship report titled “Project Management” has been prepared in fulfillment of the requirements of the BBA program at the Department of Business Administration, Sonargaon University (SU). The report was conducted by Sonjoy Chowdhury, ID: BBA2103024098, under my supervision. I assure that this report and its contents will not be used for any other purpose.

Md. Mostakin

Lecturer

Department of Business Administration

Sonargaon University (SU)

Declaration of Student

I am Sonjoy Chowdhury, a student in the Bachelor of Business Administration program with ID BBA2103024098 at Sonargaon University. I want to sincerely state that the report titled "Project management of power & Project controls ltd." has been genuinely created by me. During the preparation of this report, I ensured full compliance with international copyright regulations. I also want to clarify that this report has not been submitted anywhere else for the purpose of obtaining a degree.

Yours Sincerely,

Sonjoy Choudory

ID: BBA2103024098

Program: BBA

Major: HRM

Department of Business Administration

Sonargaon University (SU)

Letter of Authorization

This is to certify that Sonjoy Chowdhury ID No: BBA2103024098,

Department of Business Administration, has completed her internship report titled on "Project Management of Power & Project Controls LTD. Dhaka, Bangladesh under my supervision as a part of partial requirement for obtaining Bachelor of Business Administration (BBA) degree in HRM Major. This report can be accepted for evaluation.

I have gone through the report and found it's a well written report. He has completed the report by himself. I wish him every success in life.

Md. Mostakin

Lecturer

Department of Business Administration

Sonargaon University (SU)

Acknowledgement

First of all, I want to thank my supervisor Mr. Devayan Mukherjee (Application Engineer - Power & Project Controls Ltd.) for guiding and advising me during my internship at Power & Project Controls Ltd. It could be quite impossible to make this report without his guidelines.

Then I would like to thank my university supervisor, Md. Mostakin for helping me to bring my internship report to completion on "Management of certain projects at Power & Project Controls Ltd."

I would like to express my gratitude to all the faculty and staff members of Sonargaon University. This report is a fulfillment of the four years I have spent here and the essence of all that I have learnt.

I also thank my colleagues who helped me by providing informative instructions. I was closely attached to them during my internship term. Without them this project would have been very difficult. I also thank my parents, and some friends who kept on this long process with me, always offering support. Finally, I also express my sincere gratitude to all those who participated in preparing the report.

Sonjoy Choudory

ID: BBA2103024098

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Executive summary

As part of my BBA program, I completed a three-month internship at Power & Project Controls Ltd. on the project "Construction, Sourcing, Supply, Installation and Commissioning of Geotechnical Laboratory Equipment at KUET." The internship gave me practical knowledge of project management, budgeting, HR practices, and training. This report summarizes my key learning and observations.

Project management ensures projects are completed on time, within budget, and at the desired quality. Studies show that effective planning, budgeting, training, and monitoring are vital for success. Human resource management and motivation also play a central role. In Bangladesh, these practices are increasingly important in industrial and infrastructure projects.

Power & Project Controls Ltd. is a reputed company specializing in industrial supply, sourcing, installation, and commissioning. Its clients include universities, power plants, and industries. The company emphasizes confidentiality, structured management, and employee training to ensure efficient project completion.

During my internship, I assisted in data entry, budget estimation, and project administration. I observed how the company manages scheduling, documentation, and communication with stakeholders. I also witnessed training and motivational practices for workers, which helped me understand the link between employee development and project performance.

The company follows a structured and confidential project management process. Training programs improve productivity, and financial planning is a priority. However, communication between managers and workers is sometimes weak, which can reduce efficiency. Overall, the systematic approach ensures project success.

The company should strengthen communication with workers, adopt digital project management tools, expand training programs, and introduce reward systems to boost motivation**.**

In conclusion, the internship was a valuable experience that enhanced my knowledge of project management and HR practices. The learning will support my future professional development.

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Chapter - 01

Introduction

Internship is a critical component of the Bachelor of Business Administration (BBA) program. It provides students with the opportunity to bridge the gap between theoretical knowledge gained in the classroom and practical experience in the professional environment. [7] Through internship, students can develop essential skills, gain industry exposure, and understand real-world business and management practices.

For my BBA program, I completed my internship at Power and Project Controls Limited (PPCL), Bangladesh, a renowned industrial vendor company specializing in project management, engineering solutions, and equipment procurement. The company focuses on delivering high-quality services to clients, ensuring projects are completed efficiently, within budget, and according to client requirements. More information about the company can be found on their website: www.ppclbd.com.

During my internship, I was assigned to the Project Management Division under the supervision of Mr. Devayan Mukherjee, Application Engineer and Project Manager at PPCL. My primary responsibility was to assist in a major project: the construction and setup of a Geotechnical Laboratory at the Department of Civil Engineering, Khulna University of Engineering and Technology (KUET). This project involved various tasks, from space measurement and budget estimation to procurement, installation, and commissioning of laboratory equipment.

1.1 Background of the Study

During my internship, I was actively involved in several key tasks that contributed to the successful execution of the laboratory project at the Civil Engineering Building, KUET. I began by conducting detailed measurements of the laboratory space, which helped in planning an efficient layout. I also assisted in budget estimation, calculating the total construction and equipment costs to ensure the project remained within financial limits. [4] My responsibilities included coordinating with local vendors and subcontractors for construction work and the manufacturing of laboratory tables capable of supporting up to 200 kg. Additionally, I managed the procurement of secondary equipment, such as air conditioners, desktops, and multiplugs, in accordance with the customer's requirements. A significant part of my role was overseeing the sourcing, installation, commissioning, and testing of specialized geotechnical equipment to ensure technical accuracy and operational efficiency. Throughout the project, I provided regular updates and reports

to the project supervisor, enabling smooth execution and continuous monitoring of the project's progress.

1.2 Geotechnical Equipment Used

The laboratory setup at KUET was equipped with a range of specialized geotechnical instruments, all procured from VJ Tech, UK, to ensure high-quality testing and research capabilities. The equipment included a Motorized Liquid Limit Machine for soil consistency analysis, a Static Cone Penetrometer for assessing soil strength, and an Automated Consolidation System for determining soil compressibility. Other essential instruments comprised a Furnace Burner, a Constant Head Permeameter for permeability tests, a Hydraulic Extruder for sample preparation, and a Vacuum Oven for controlled drying of soil specimens. Additionally, a Pile Integrity Tester was installed to evaluate the structural soundness of foundation piles. Together, these instruments provided a comprehensive setup for conducting advanced geotechnical experiments in the laboratory.

1.3 Learning Outcome

This internship provided me with valuable practical experience in various aspects of project management. I gained hands-on exposure to planning and organizing complex projects, as well as budget estimation and financial management to ensure efficient allocation of resources. I was involved in vendor management and coordination with contractors, and I actively participated in the procurement, installation, and commissioning of technical equipment, particularly geotechnical instruments. In addition, the internship helped me improve communication and

reporting skills, as I regularly provided updates to supervisors and stakeholders. Beyond technical and managerial tasks, the experience significantly enhanced my problem-solving, managerial, and technical skills and offered firsthand insight into the challenges of managing a technical project within an academic environment.

1.4 Purpose of the Study

The purpose of this report is to present a comprehensive overview of my internship experience, highlighting project management practices, tasks performed, and learning outcomes from the

KUET Geotechnical Laboratory project. This report also reflects how theoretical knowledge from the BBA program can be applied in practical, real-world project scenarios.

Primary purpose:

The primary purpose of this study is to fulfill the academic requirements of the BBA program through the completion of an internship report. It also aims to connect theoretical knowledge with practical experience by analyzing the project management practices of Power & Project Controls Ltd.

Secondary Purpose

The secondary purpose of this study is to gain firsthand experience in various project management activities, such as planning, budgeting, procurement, vendor management, and equipment installation. Additionally, it seeks to identify the challenges faced during project execution, evaluate the strengths of the organization, and provide practical recommendations for improving future projects.

1.5 Scope of the Study

The scope of this report is limited to the activities performed and observed during the internship period at Power & Project Controls Ltd. In particular, it focuses on the project "Construction, Sourcing, Supply, Installation, and Commissioning of Geotechnical Laboratory Equipment at KUET." The report discusses project management practices such as planning, scheduling, budgeting, procurement, vendor coordination, installation, and quality assurance. It also highlights human resource practices, teamwork, and communication strategies within the organization. [3] However, the scope does not include all projects of the company; it is restricted to the KUET laboratory project and the tasks that were directly associated with my internship responsibilities.

1.6 Limitations of the Study

Like any academic or professional study, this report also has certain limitations. Firstly, the internship duration was only three months, which limited the opportunity for deeper investigation and long-term observation. Secondly, some organizational and financial data were confidential, which restricted access to complete information. Thirdly, the study was geographically limited to the KUET Geotechnical Laboratory project, and therefore the findings may not represent all of the

company's projects. Another limitation was my lack of technical knowledge as a business student, which sometimes made it difficult to fully understand the engineering aspects of geotechnical equipment installation. Finally, some secondary data, such as vendor agreements and detailed procurement documents, were not available for review, which constrained the overall analysis of the project.

Chapter – 02
Literature Review

Literature Review

Literature review provides a theoretical foundation for understanding the concepts and practices applied in a project. In this internship, the focus was on project management in the context of constructing a geotechnical laboratory at KUET. Reviewing existing literature helps in understanding project management principles, techniques, and challenges that are relevant to real-world projects.

2.1 Project Management: Concept and Importance

Project management is the process of planning, organizing, coordinating, and controlling resources to achieve specific goals within a defined timeline and budget. It is a critical function in both industrial and academic projects.

A fundamental feature of project management is the presence of **defined objectives**. Every project is designed with specific goals and deliverables that guide the planning and execution process. [13] Clearly stated objectives ensure that all stakeholders share a common understanding of the expected outcomes, thereby enhancing focus and coordination throughout the project lifecycle.

Another significant aspect is time management, as every project operates within a predetermined timeframe. [5] Projects are initiated with a defined start date and are expected to be completed by a set deadline. Effective time management not only ensures that tasks are executed in sequence but also helps maintain project momentum and avoid delays, which are critical to achieving successful outcomes.

Equally important is risk management, which involves the identification, assessment, and mitigation of potential risks during project execution. [4] Proactive risk management enables project teams to anticipate challenges, minimize disruptions, and ensure that the project remains on track. This systematic approach contributes to maintaining stability and achieving project objectives despite uncertainties.

Importance of Project Management:

Project management plays a vital role in ensuring the timely completion of projects by maintaining schedules and monitoring progress against deadlines. It also optimizes the use of resources and reduces wastage, ensuring that manpower, materials, and finances are utilized efficiently. Another key advantage is the way project management improves communication among team members and stakeholders, fostering collaboration and minimizing misunderstandings. At the same time, it helps in maintaining quality standards by setting clear benchmarks and monitoring deliverables throughout the project lifecycle. Furthermore, project management facilitates proper budgeting and cost control, allowing organizations to achieve their objectives within financial constraints and avoid unnecessary expenditures. [11] Collectively, these features highlight the importance of project management in delivering successful outcomes.

2.2 Project Management Processes

According to the Project Management Institute (PMI), project management involves five key processes. The first, Initiation, focuses on defining the project scope and objectives, identifying stakeholders, and assessing feasibility. The second, Planning, includes developing a detailed project plan with tasks, timelines, budgets, resource allocation, procurement, and risk management strategies. The Execution phase involves implementing the plan, coordinating with vendors and team members, and ensuring quality standards are maintained. [10] During Monitoring and Controlling, project progress is tracked, deviations are managed, corrective actions are taken, and regular reports are provided to stakeholders. Finally, Closure ensures the completion of deliverables, proper handover of the final product, and documentation of lessons learned, which provides insights for future projects.

2.3 Tools and Techniques in Project Management

Modern project management relies on a variety of tools and techniques to ensure efficient planning, execution, and monitoring of projects. One such tool is the Gantt Chart, which provides a visual representation of the project timeline and individual tasks, helping track progress at a glance. The Work Breakdown Structure (WBS) is used to divide the project into smaller, manageable tasks, allowing for better organization and resource allocation. [1] The Critical Path Method (CPM) identifies the key activities that determine the overall project duration, enabling managers to prioritize critical tasks. [4] Budgeting and cost estimation tools are essential to ensure that the project remains within financial limits, while risk management techniques help identify potential problems in advance and develop mitigation plans. [5] These tools and techniques were effectively applied during the KUET Geotechnical Laboratory project, contributing to its systematic execution and successful completion.

2.4 Application in Laboratory Construction Project

During the internship project, several project management concepts were applied to ensure the successful construction and setup of the KUET Geotechnical Laboratory. In terms of planning and scheduling, I conducted detailed measurements of the laboratory space, estimated construction and equipment costs, and scheduled the installation and commissioning of all equipment. Resource management involved coordinating with local contractors for construction work and laboratory table manufacturing, as well as procuring geotechnical equipment from international suppliers. Quality and risk management were integral, ensuring that construction met quality standards and that geotechnical equipment was tested and commissioned to satisfy technical requirements. Effective communication and reporting were maintained through regular feedback to the project supervisor and coordination with internal team members and external vendors. This practical application highlighted the relevance of project management principles, tools, and techniques in real-world projects. The internship experience allowed for the effective application of these concepts, facilitating efficient planning, execution, and monitoring, while ensuring that project objectives were achieved on time and within budget.

Chapter - 03
Organizational profile

Organizational Profile

This chapter provides a detailed profile of Power and Project Controls Limited (PPCL), Bangladesh, the host organization where I completed my internship. It highlights the company's background, vision and mission, services, organizational structure, and achievements. Understanding the profile of the organization helps in linking the internship activities with the company's operations and goals.

3.1 Company Overview

Power and Project Controls Limited (PPCL) is a leading industrial vendor company in Bangladesh, specializing in project management, engineering solutions, equipment procurement, installation, and commissioning. The company collaborates with both national and international partners to provide state-of-the-art equipment and execute technically challenging projects. PPCL serves clients across a diverse range of sectors, including academic institutions such as universities and research centers, industrial organizations, and various public and private sector engineering projects. Over time, the company has established a strong reputation for delivering projects on schedule, maintaining high quality standards, and consistently meeting customer expectations.

3.2 History and Establishment

PPCL was established with the aim of providing world-class engineering solutions and project management services in Bangladesh. The founders envisioned a company that could meet the growing demand for advanced testing equipment, laboratory construction, and industrial project execution**.**

Over time, PPCL has collaborated with renowned global suppliers, such as VJ Tech, UK, to bring advanced geotechnical equipment into Bangladesh. Through successful project completion and strong client relationships, PPCL has positioned itself as a reliable and innovative engineering service provider in the country.

3.3 Vision, Mission, and Core Values

PPCL's vision is to be the leading provider of innovative and reliable project management and engineering solutions in Bangladesh. The company's mission focuses on delivering efficient, cost-

effective, and sustainable project solutions while ensuring international quality standards in every project. PPCL emphasizes strengthening collaboration with clients, contractors, and global suppliers, and providing tailor-made solutions for diverse technical requirements. The company upholds several core values, including integrity and professionalism, customer satisfaction, commitment to quality, innovation and continuous improvement, and accountability and sustainability. These guiding principles reflect PPCL's dedication to excellence, reliability, and long-term growth in the industrial and engineering sectors.

3.4 Key Services

PPCL provides a wide range of services across multiple sectors, emphasizing technical expertise and project efficiency. One of the major services is Project Planning and Management, which involves comprehensive planning, scheduling, budgeting, and monitoring to ensure timely completion of projects with optimal resource utilization. The company also specializes in Laboratory Setup and Construction, designing and constructing laboratories for universities and research institutions, along with providing furniture, infrastructure, and essential utilities. Another key service is Procurement of Equipment, where PPCL sources and purchases specialized equipment from reputed international suppliers and offers customized procurement solutions tailored to client requirements. Additionally, the company handles Installation, Commissioning, and Testing, ensuring that all specialized equipment is properly installed,

commissioned, and tested for functionality and performance. Lastly, PPCL provides Consultancy Services, including feasibility studies, budget estimation, vendor selection, quality assurance, and risk management. These services collectively reflect PPCL's capability to deliver technically advanced and well-managed projects across academic, industrial, and public sectors.

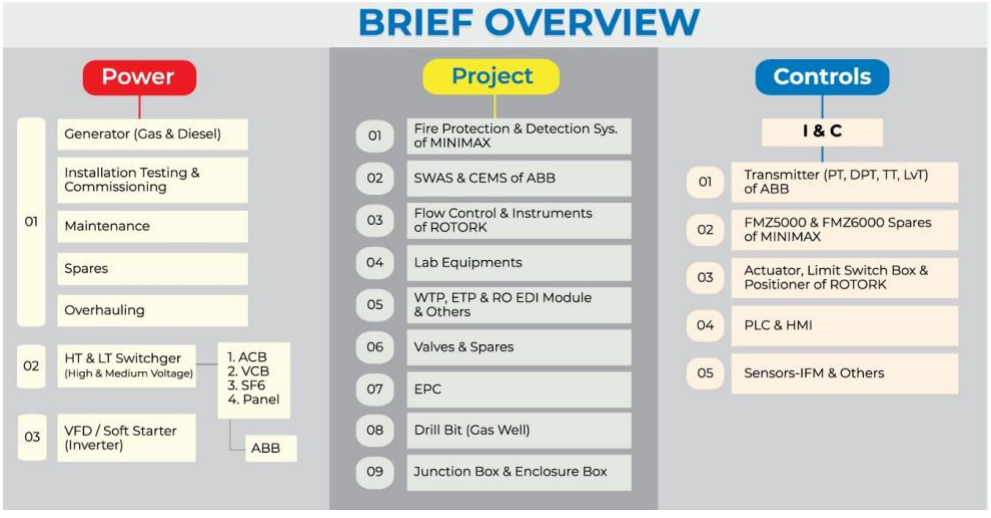


Figure: Brief Overview of PPCL Jobs and Projects

Sourced from PPCL Brochure



Figure: Major Vendors of PPCL

Sourced from PPCL Brochure

3.5 Organizational Structure

PPCL maintains a formal organizational hierarchy to ensure operational efficiency and accountability. At the top, the Managing Director/CEO provides strategic leadership and makes key decisions guiding the company's direction. Project Managers are responsible for planning, supervising, and monitoring projects to ensure timely and successful execution. The Application Engineers handle the technical aspects of projects, including equipment installation and client communication. The Procurement and Logistics Team manages sourcing, vendor coordination, and timely delivery of materials. The Finance and Accounts Department ensures proper budgeting, accurate accounting, and continuous financial monitoring. Finally, the Administrative and Support Staff provide essential daily operational and administrative assistance. This structured hierarchy

enables PPCL to execute complex projects efficiently while maintaining accountability at every level.

3.6 Major Projects and Achievements

Over the years, PPCL has successfully undertaken several notable projects that highlight its expertise and reliability. A significant achievement was the development of the Geotechnical Laboratory at Khulna University of Engineering & Technology (KUET), which included complete construction, procurement, installation, and commissioning of advanced geotechnical equipment. In addition, the company has contributed to laboratory setups in other universities and research centers by providing technical support, modern furniture, and international-standard equipment. Beyond academic projects, PPCL has delivered turnkey solutions for industrial facilities and infrastructure projects, demonstrating its capability to manage complex technical operations. Through these projects, PPCL has established itself as a trusted partner for both academic and industrial sectors in Bangladesh.

In summary, Power and Project Controls Limited (PPCL) is a reputed engineering and project management company that has made significant contributions to the academic and industrial sectors of Bangladesh. Its diverse services, strong values, and successful project executions have made it a reliable organization in the industry. For me, PPCL provided a practical platform to gain hands-on experience in project management during my internship.

Chapter - 04

Analysis of the study

This chapter presents an in-depth analysis of the internship experience at Power and Project Controls Limited (PPCL), Bangladesh, focusing on the KUET Geotechnical Laboratory Project. The analysis examines how theoretical knowledge of project management was applied in real-life practice, evaluates the effectiveness of project execution, identifies challenges, and highlights learning outcomes.

4.1 Theoretical Knowledge vs Practical Experience

During the internship, I gained firsthand insight into the application of project management theories in a real-world setting. In terms of project planning, theory emphasizes that a project must begin with proper planning, including scope definition, budgeting, and resource allocation. In practice, at KUET, the project commenced with detailed measurement of the laboratory space and preparation of a comprehensive budget plan to allocate costs for construction, procurement, and equipment installation. Regarding the execution of work, theory suggests that execution involves coordinating resources and implementing planned activities. Practically, I observed direct involvement in subcontracting construction workers, purchasing equipment, and ensuring timely delivery from both local and international vendors. [9] Finally, monitoring and supervision are critical in theory for tracking progress, controlling costs, and maintaining quality standards. During the internship, continuous updates were provided to the project manager, while equipment testing and installation were closely supervised to ensure proper functionality and adherence to quality requirements. This experience bridged the gap between theoretical knowledge and practical application, reinforcing the importance of effective planning, execution, and monitoring in project management.

4.2 Analysis of Major Internship Tasks

During my internship, I gained practical experience through several key tasks that were crucial for the successful execution of the KUET Geotechnical Laboratory project. Space measurement was a critical task, as accuracy determined the exact placement of laboratory equipment, and I learned how technical design depends on precise measurements. [6] In budget estimation, I gained knowledge of cost breakdown methods for construction, furniture, and advanced equipment, which helped balance client requirements with the available budget. Through subcontracting local vendors,

I acquired insights into vendor selection and negotiation, observing how the reliability and experience of contractors directly impact project success. The procurement and sourcing of specialized equipment from international suppliers like VJ Tech, UK, provided practical exposure to international procurement procedures, including customs clearance, shipment delays, and supplier communication. Finally, during installation and commissioning, I observed the technical

setup of advanced geotechnical equipment and learned the importance of thorough testing before final handover. These tasks collectively enhanced my understanding of project management in a real-world, technical environment.

4.3 Challenges Faced

During the internship, several challenges arose that provided valuable learning experiences. Time delays occurred due to contractor unavailability and international shipping issues, highlighting the importance of backup planning and effective scheduling. Budget constraints were another challenge, as clients often requested additional facilities within a fixed budget, emphasizing the need for prioritization and cost-control techniques. Vendor management posed difficulties while coordinating with multiple contractors and suppliers, underscoring the necessity of strong communication skills and proper documentation. [4] Finally, technical knowledge gaps became apparent, as certain equipment installations required advanced engineering expertise, reinforcing the importance of collaboration with technical experts. These challenges helped develop problem-solving skills and a practical understanding of managing complex projects in a real-world setting.

4.4 Strengths Observed in the Organization

During my internship at PPCL, I observed several organizational strengths that contributed to the successful execution of projects. The company maintains an efficient procurement system, enabling smooth communication and coordination with international suppliers. Strong project supervision ensures continuous monitoring by project managers, which helps keep tasks on schedule and standards consistent. PPCL demonstrates a clear commitment to quality, placing emphasis on delivering laboratory facilities that meet international standards. [10] Additionally, the organization fosters a teamwork culture, promoting effective collaboration among engineers, interns, and contractors to achieve project goals efficiently.

4.5 Personal Learning Outcomes

This internship provided me with substantial practical learning and skill development. I gained practical exposure to the full project management cycle, from initiation to closure, and acquired hands-on experience in budgeting and resource allocation. I developed skills in vendor and

subcontractor management and improved my communication and negotiation abilities. Furthermore, I enhanced my technical knowledge of laboratory equipment installation and strengthened my capacity to analyze problems and apply effective solutions. Overall, the experience significantly contributed to both my professional and technical growth in the field of project management.

The analysis of my internship demonstrates that the KUET Geotechnical Laboratory Project was an excellent platform to apply classroom knowledge in a real industrial project. Despite several challenges, PPCL successfully managed the project with effective planning, procurement, and supervision. Personally, I developed both managerial and technical skills that will support my future career in project management.

Chapter - 05

Findings of the study

This chapter highlights the key findings from my internship experience at Power and Project Controls Limited (PPCL), focusing on the Geotechnical Laboratory Construction Project at

Khulna University of Engineering and Technology (KUET). The findings are based on my direct participation, observation, and analysis of project management practices throughout the internship.

5.1 Findings Related to Project Management Practices

The internship project at KUET highlighted several important insights into effective project management practices. First, effective planning is essential, as detailed initial planning—including space measurement, budget estimation, and resource allocation—significantly reduces risks during project execution. Second, budget estimation requires flexibility, since unexpected costs such as transport, installation complexities, and variations in local contractor charges can arise, making adaptable financial planning crucial. Third, procurement challenges in international sourcing were evident, particularly when sourcing equipment from VJ Tech, UK, which required long lead times, proper documentation, and careful coordination with suppliers, emphasizing the importance of understanding global procurement and logistics. Fourth, subcontractor management is critical, as the efficiency and reliability of local contractors directly impacted project progress in construction and furniture manufacturing. Fifth, quality assurance requires supervision, and regular monitoring by the project manager ensured that both construction and equipment installation met required standards; without proper supervision, project outcomes could have fallen below expectations. Finally, technical expertise is necessary for specialized projects, as advanced laboratory equipment required specific knowledge for installation and commissioning, highlighting the need for specialized engineers alongside project managers.

5.2 Findings Related to Organizational Strengths

The internship project also highlighted several organizational strengths of PPCL. The company maintains a strong vendor network, with well-established relationships with international suppliers, which facilitated access to world-class laboratory equipment. Efficient project supervision was observed, as the project manager maintained constant communication with all stakeholders, ensuring a smooth workflow throughout the project. The organization fosters teamwork and collaboration, encouraging knowledge sharing and cooperation among engineers, interns, and contractors. Additionally, PPCL demonstrated a commitment to client requirements, striving to deliver the project in line with KUET's specifications and expectations, even in the face of budget and time constraints. These strengths contributed significantly to the successful completion of the laboratory project.

5.3Findings Related to Internship Experience

The internship provided valuable insights and practical experience that went beyond traditional classroom knowledge, allowing me to engage with the full project management cycle, including initiation, planning, execution, monitoring, and closure. Through active participation, I developed and refined a variety of practical skills, such as budgeting, subcontracting, negotiation, vendor management, and effective communication with stakeholders. The experience also exposed me to real-world challenges, including budget limitations, shipment delays, and occasional inefficiencies among subcontractors, which helped me understand the complexities and unpredictability inherent in large-scale technical projects. Moreover, the internship contributed significantly to my professional growth, enhancing my ability to work under pressure, approach problems with practical solutions, and collaborate effectively with diverse teams comprising engineers, contractors, supervisors, and clients. [7] Overall, this experience not only reinforced my theoretical understanding of project management but also equipped me with the confidence and skills necessary to handle real-world projects in a professional environment.

The findings of this internship highlight that successful project management relies on careful planning, effective budgeting, efficient vendor and subcontractor management, and strong supervision throughout the project lifecycle. PPCL demonstrated significant organizational strengths, including a robust procurement system, efficient project execution, and a culture of teamwork and collaboration. On a personal level, the internship provided me with invaluable professional experience, allowing me to develop both technical and managerial skills. It also

offered practical insight into how theoretical concepts are applied in real-world projects, bridging the gap between academic knowledge and practical implementation. Overall, the internship experience was instrumental in enhancing my understanding of project management and preparing me for future professional challenges.

CHAPTER – SIX

Recommendations and Conclusion.

6.1 Recommendations

Based on my internship experience at Power and Project Controls Limited (PPCL) during the construction of the Geotechnical Laboratory at KUET, several recommendations can be proposed to further enhance the efficiency, quality, and overall effectiveness of future projects. The observations during the internship highlighted areas where small improvements could lead to significant gains in project execution. These recommendations focus on both operational and managerial aspects, aiming to optimize resource utilization, streamline communication, and strengthen coordination with vendors, subcontractors, and internal teams. Implementing these suggestions could help PPCL minimize potential delays, reduce unexpected costs, and ensure that all projects consistently meet client expectations. [3] Furthermore, adopting systematic documentation, enhanced risk management strategies, and periodic training for staff and interns could support continuous improvement and maintain the organization's high standards of quality and professionalism. By addressing these areas, PPCL can continue to build its reputation as a reliable, innovative, and efficient project management company in both academic and industrial sectors.

6.1.1 Recommendations for the Organization (PPCL)

Based on my internship experience, several recommendations can be made to enhance the overall efficiency and effectiveness of PPCL in managing projects. First, PPCL should strengthen project planning tools by placing greater emphasis on the use of modern project management software, such as MS Project, Primavera, or ERP systems, to facilitate efficient scheduling, budgeting, and progress monitoring. Second, the organization should develop formal risk management strategies to anticipate and address unexpected issues such as procurement delays, shipment challenges, or contractor inefficiencies. Third, it is advisable to enhance vendor and subcontractor evaluation processes by implementing a systematic assessment framework to ensure the reliability, competence, and quality of work of local contractors before engagement. Fourth, PPCL could build a knowledge-sharing culture, where technical expertise, particularly related to specialized equipment installation, is documented and shared internally to support future projects and training of new staff. Finally, maintaining continuous client communication is essential; stronger communication channels with clients, such as KUET, will help manage expectations, prevent

scope misalignment, and ensure that project objectives are clearly understood and achieved. Implementing these recommendations can significantly improve project efficiency, quality, and overall client satisfaction.

6.1.2 Recommendations for Academic Institutions (KUET and Others)

Based on the internship experience, several recommendations can be made for academic institutions to facilitate smoother project execution and more effective laboratory setups. First, institutions should allocate dedicated infrastructure for laboratories by providing adequate space, utilities, and necessary facilities well in advance. Proper planning of infrastructure minimizes construction-related challenges and ensures that project timelines are maintained. Second, universities and research centers should collaborate more closely with vendors and project partners during the planning and design phases. Early engagement helps align laboratory requirements with project deliverables, ensures technical specifications are met, and promotes better coordination throughout the project lifecycle. Implementing these recommendations can significantly enhance the efficiency, quality, and success of laboratory construction and equipment installation projects in academic settings.

6.2 Conclusion

Based on my internship experience at PPCL, several recommendations can be made for future interns to maximize learning and contribution during similar projects. First, interns should learn project management tools early, including Gantt Charts, Work Breakdown Structures (WBS), and the Critical Path Method (CPM), to effectively understand project timelines, task dependencies, and resource allocation before joining the project. Second, interns should focus on developing strong communication and negotiation skills, as they frequently interact with multiple stakeholders, including project managers, engineers, vendors, and clients. Finally, interns should be open to multi-tasking and actively participate in a variety of project activities, such as budgeting, procurement, supervision, and reporting. This exposure helps them gain a holistic understanding of the project management process and ensures practical learning across technical, managerial, and administrative aspects.

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In-text Citations Examples

1. Project planning is essential for minimizing risks (Kerzner, 2017).
2. According to Meredith and Mantel (2018), managerial skills significantly affect project success.
3. Systematic research methods are crucial in business projects (Saunders et al., 2019).
4. Defining the scope clearly is critical (PMBOK® Guide, 2021).
5. The equipment catalog provides detailed specifications for geotechnical tools (VJ Tech Ltd., 2024).

Appendices

Appendix 1

Supporting Documents and Materials

Internship Placement Letter

A scanned copy of the official internship placement/acceptance letter issued by Power and Project Controls Limited (PPCL) confirming my role as a Project Intern under the supervision of Mr. Devayan Mukherjee (Application Engineer & Project Manager).

Project Details

1. Project Name: Construction of Geotechnical Laboratory
2. Client: Department of Civil Engineering, Khulna University of Engineering & Technology (KUET)
3. Vendor Company: Power and Project Controls Limited (PPCL)
4. Duration: [Insert Internship Period, e.g., March 2025 – June 2025]

List of Geotechnical Equipment Installed

1. Motorized Liquid Limit Machine
2. Static Cone Penetrometer
3. Automated Consolidation System
4. Furnace Burner
5. Constant Head Permeameter
6. Hydraulic Extruder
7. Vacuum Oven
8. Pile Integrity Tester

(All equipment sourced from VJTECH, UK)

Tasks Performed During Internship

1. Measurement of laboratory space.
2. Estimation of construction budget.
3. Subcontracting locals for construction and furniture preparation.
4. Procurement of air conditioners, desktops, multiplugs, and secondary lab equipment.
5. Installation, commissioning, and testing of geotechnical equipment.
6. Regular project progress reporting to supervisor.

Appendix 2

Questionnaire

Section A: General Information

1. **Name (Optional): _____**

2. **Designation/Role:**

A. ☐ Project Manager

B. ☐ Subcontractor

C. ☐ Faculty (Civil Engineering, KUET)

D. ☐ Student/User

E. ☐ Other: _____

3. **How long have you been associated with this project?**

   A. ☐ Less than 1 month

   B. ☐ 1–3 months

   C. ☐ More than 3 months

Section B: Project Planning and Management

4. **How would you rate the overall project planning?**
   A. ☐ Excellent
   B. ☐ Good
   C. ☐ Average
   D. ☐ Poor

5. **Were the project goals and objectives clearly communicated to you?**
   A. ☐ Yes
   B. ☐ No
   C. ☐ Partially

6. **Do you think the budgeting and cost estimation were realistic?**
   A. ☐ Yes
   B. ☐ No
   C. ☐ Not Sure

Section C: Implementation and Execution

7. **How would you evaluate the performance of subcontractors (construction, furniture, installation)?**

   A. ☐ Very Satisfactory

   B. ☐ Satisfactory

   C. ☐ Neutral

   D. ☐ Unsatisfactory

8. **Were the required laboratory equipment and materials delivered on time?**

   A. ☐ Always

   B. ☐ Sometimes

   C. ☐ Rarely

9. **How would you rate the quality of installed geotechnical equipment (VJTECH, UK)?**

   A. ☐ Excellent

   B. ☐ Good

C. ☐ Average
D. ☐ Poor

Section D: Challenges and Improvements

10. What were the major challenges faced during the project?

A. ☐ Budget constraints

B. ☐ Procurement delays

C. ☐ Space limitations

D. ☐ Subcontractor performance

E. ☐ Other: _____

11. What improvements would you suggest for future projects of this type?

12. Overall satisfaction with the project outcome:

A. ☐ Very Satisfied
B. ☐ Satisfied
C. ☐ Neutral
D. ☐ Dissatisfied