EFFECTIVENESS OF TRAINING AND DEVELOPMENT AND E-LEARNING IN BHILAI STEEL PLANT

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by

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DECLARATION BY STUDENT

I hereby declare that the data presented in this Internship report entitled "A study on Effectiveness of Training and Development and E-Learning Program in Bhilai Steel Plant" is based on the results of investigations carried out by me in the (Master's in Business Administration) at the Goa Business School, Goa University, under the mentorship of Mr. Sadanand Gaonkar and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities/Goa Business School will be not be responsible for the correctness of observations / experimental or other findings given the internship report/work.

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COMPLETION CERTIFICATE

This is to certify that the internship report "A study on Effectiveness of Training and Development and E-Learning Program in Bhilai Steel Plant" is a bonafide work carried out by Ms. Nidhi Nandedkar under my mentorship in partial fulfillment of the requirements for the award of the degree of (Master's Degree) in the Discipline (Master's in Business Administration) at the Goa Business School Goa University.

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Thank you all for your support and guidance.

COMPANY CERTIFICATE

सेल SAIL

भिलाई इस्पात संयंत्र
BHILAI STEEL PLANT

मानव संसाधन विकास विभाग
HUMAN RESOURCES DEVELOPMENT DEPARTMENT

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प्रमाणित किया जाता है कि श्री / कुमारी
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ने अवकाश कालीन प्रशिक्षु के रूप में दिनांक से तक प्रशिक्षण प्राप्त किया ।
has undergone project based training from 15/01/2024 to 04/05/2024

प्रोजेक्ट
Project Report on " Effectiveness of Training and E-Learning in Bhilai Steel Plant ."

इस अवधि में उनका कार्य निष्पादन रहा ।
His / her performance during the training period has been Excellent

भिलाई, दिनांक
Bhilai, Dated 04/05/2024

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EXECUTIVE SUMMARY

The Bhilai Steel Plant (BSP) research clarifies the effects of e-learning and training activities on employee performance and organizational results. As the principal division of Steel Authority of India Limited (SAIL), BSP is an important player in the Indian steel sector and a major force in the development of the country. The purpose of the study is to fill up knowledge gaps about the relationship between training and work performance and to assess how effective BSP's e-learning program is.

The results highlight the broad participation of the workforce by revealing a varied distribution of job titles among participants. Across a range of training programs, including workshops, computer training, in-plant training, management training, and vocational training, high participation rates are noted. Furthermore, the fact that all participants use e-learning platforms such as BSP e-Pathshala and E-Abhigyan suggests that these platforms are widely accepted and used.

Effective e-learning tactics and training programs have a major impact on work performance, as shown by regression analysis. Work performance is significantly impacted by training programs, even with differences in particular training components. Likewise, work performance and learning outcomes show appreciable gains with the use of e-learning techniques, especially those that center on system and information quality.

These results highlight the value of e-learning strategies and strategic training programs in raising employee performance and corporate competitiveness. Practitioners of human resource management may use these insights to help companies like Feedback on Training Received from Employee Bosses, Continuous Improvement of E-Learning, and Training Linked to Performance

Organizations may further increase employee growth and productivity by addressing areas for improvement in training program planning and data quality.

To sum up, the research highlights how important strategic training and e-learning programs are to improving employee skills and organizational performance, which in turn boosts an organization's ability to compete and succeed.

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CHAPTER 1: OVERVIEW OF COMPANY

1.1 STEEL AUTHORITY OF INDIA (SAIL)

Figure 1: SAIL Logo

SAIL envisions itself as a globally respected corporation and the leading entity in the Indian Steel industry. This includes a commitment to excellence in quality, productivity, profitability, and customer satisfaction. As a major player in India's Steel sector, SAIL contributes significantly to nation-building. Its defense-grade Steel has been employed in crucial national projects such as the construction of INS Komorta. SAIL proudly holds the prestigious status of being one of India's 13 Maharatnas, showcasing its strategic importance and impact on the nation's economic landscape. SAIL is the country's second-largest producer of iron ore, managing the second-largest mine network for essential raw materials like iron ore, limestone, and dolomite.

1.1.1 Operational network

The operational network of SAILS consists of five integrated Steel factories situated in various locations. This comprises the West Bengal Steel Plants

- Durgapur,
- Bokaro,
- Rourkela,

- Odisha,
- Chhattisgarh's Bhilai Steel Plant;

Moreover, there is the West Bengal Steel Plant IISCO.

Additionally, it is home to three unique Steel Plants: the Ferro alloy plant at Chandrapur,

Alloy Steel Plant,

Salem Steel Plant,

Visvesvaraya Iron and Steel Plant.

SAIL Network comprises 37 branch sales offices and 43 warehouses. SAIL has rural dealership schemes with over 2300 dealers, establishing itself as the largest Steel retail network in the country. Various divisions, such as the International Trade Division, SAIL Refractory Units (SRU), andResearch and Development by RDCIS Center for Engineering and Technology, SAIL'scomprehensive approach to Steel production and management.

1.2 BHILAI STEEL PLANT

Figure 2. View of Bhilai Steel Plant

Bhilai Steel Plant, located in Chhattisgarh, India, is a major producer of Steel rails, plates, and various Steel products. Established in 1959 with USSR assistance, it played a crucial role in India's Steel industry. The plant has received the Prime Minister's Trophy eleven times, showcasing its excellence. It's known for supplying the nation's longest railway tracks, measuring 260 meters. Bhilai Steel Plant is integral to the Steel Authority of India Limited (SAIL) and is its flagship unit, contributing significantly to profits**.**

1.2.1 Departments of Bhilai Steel Plant

In total, there are 72 departments. The main departments are-

Table 1: Shows the main departments of the Bhilai Steel Plant

Departments	**Functions**
Captive Mines	Manages iron ore, limestone, and dolomite mines With a consistent supply of raw materials for thesteel-making process
Cove ovens	Operates batteries for coke production
Sinter plants	Utilizes sintering technology to prepare iron ore Fines, limestone, and dolomite for blast furnace
Blast Furnaces	Houses multiple blast furnaces, crucial for Converting raw materials into hot metal.
Steel Melting Shops (SMS)	Employs Basic oxygen Furnace (BOF) technology to convert hot metal into steel, Featuring advanced refining units.

Rail and Structural Mill	Manufacturers' plain rounds TMT bars and Structural products.
Wire Rod Mill	Produces plain wire rods and TMT bars
Plate Mill	Rolls out heavy and medium plates
Auxiliary Units	Includes power plants oxygen, Refractory Materials and foundry shops
7 MT Modex Units	Recent additions feature a new blast furnace, Steel melting shop, universal rail mill, and barand rod mill.
Finance Department	Manages the finance resources
Personnel Department and Human resource Development Department	Responsible for Hr. Functions including Recruitment, training, and employee well-being
Material management	Coordinates the procurement and utilization of Raw material
Project Department	Oversees modernization and expansion Initiatives

Source: (sail.co.in, n.d.)

1.2.2 Production Processes

Primary raw materials include Iron ore, Limestone, coking coal, and Dolomite sourced from strategically located mines such as Dalli-Rajhra, Nandini Kuteshwar, and Hirri. In the process of iron making, coking coal from Australia and Mozambique is prepared and charged into 11 coke oven batteries to form coke. Iron ore fines, limestone and dolomite together are used to make sinter in Sinter plants. This sinter along with coke, iron ore lumps and pellets are charged

in blast furnaces to make hot metal which has about 4% of carbon in it.The hot metal from blast furnaces goes to 2 Steel melting shops to make steel. Steel Melting Shop 2 has three converters of 120 tons capacity, a vacuum arc Degasser, RH Degasser and 6 casters to make blooms and slabs. Steel Melting Shop 3 has three convertors of 170 tons capacity, Ladle Furnaces, and RH Degasser to make blooms and billets from the Billet cum Bloom casters and Beam Blank casters.

Coming to finishing mills, the slabs from SMS 2 are used to make plates in the Plate mill whereas blooms are used in the Rail and Structural Mill and Universal Rail Mill. Billets are used in Merchant Mill, Wire Rod Mills and bar and Rod Mills to make products such as angles,channels, and TMT bars.

1.2.3 Product Portfolio

Bhilai Steel Plant’s diverse product portfolio includes

The products manufactured in steel plant are -

- Rails for Indian Railways, including 260-meter-long rails and the world's longest 130-meter rails in a single piece
- Wide and heavy steel plates
- Structural steel
- Hot and cold rolled sheets and coils
- Galvanized sheets
- Electrical sheets
- Bars and rods
- Stainless steel

- Merchant products
- Wire rods
- Chemical by-products from its coke ovens and coal chemical plant.

1.2.4 Quality standards

SAIL adheres to stringent international standards such as ISO 14001, ISO 45001, SA 8000, and standards for information security and energy management.

a. National impact and social responsibility

Bhilai Steel Plant has a pivotal role in national projects such as supplying Steel to ins Vikrant the Atal tunnel, the Kudankulam nuclear power plant, the Statue of Unity, Sardar Sarovar dam, Central Vista, and Bogibeel Bridge and it is about to develop steel for S5-ballistic-missile-submarines.

b. Health and CSR

The CSR initiatives include women empowerment, education, health care services and cultural heritage.

- Bhilai Steel Plant provides world-class medical and health services. State-of-the-art Jawaharlal Nehru Hospital and Research Center is an 860-bed Durg Bhilai prime referral hospital. Thehospital at Sector 1 is dedicated to oncology care, and mine hospitals at Rajhra, Nandini, Hirri,and Kuteshwar cater to employees and dependents in these areas. The township also has 4 health centers to cover the entire township. A Main Medical Post inside the plant premises to provide prompt medical attention. In case of any emergency, the National Occupational Health and Safety Center also conducts periodic health check-ups for all employees.

- Under CSR Bhilai Steel Plant provides free education to 50 underprivileged students every yearin Bhilai Ispat Vikas Vidyalaya where 60% of the seats are reserved for girl children. The HRD conducts Recognition of Prior Learning (RPL) and certifies contractual workers for their growth and upliftment in various trades. In the area of women empowerment, the Bhilai Steel Plant provides training through the Chhattisgarh Hast Shilp Vikas Board on Godna art and bamboo craft, which helps them earn a respectful livelihood.

    - There is a community hall in villages Karsa and Ghughuaa, State-of-the-art Sports complexes, renovated various stadiums, and installed solar water dual pumps. At Bhilai Steel Plant, the cultural heritage has a profound power to help build a nation. They developed a heritage site at Devbaloda with the Archaeological Survey of Indiaand Indian Railways. We also have a Mallakhamba Academy in the Rowghat mines area in collaboration with the state sports authorities. As part of outreach programs in mines, they regularly organize various activities, such as a mobile medical van through RK Mission, drinking water through Collector, Kanker, providing E-rickshaw to Gram panchayat, distributing sanitary napkins and a Health Centre in Khodagaon

c. Township

The lush green township houses the hearts and dreams of employees and families. There are ten sectors, and each sector has a school, hospital, and market managed by Bhilai Steel Plant. This ISO-certified 8844-acre township has over 34000 houses with 6 stadiums and public buildings. They have an excellent road, water, sewerage, electrical network, and 20 gardens,including Maitri Bagh. They are currently running 17 schools with over 6000 students. They have a zoo recognized by the Central Zoo Authority with 300 animals of 38 species of which 15 are endangered.

1.2.4 Organizational Structure

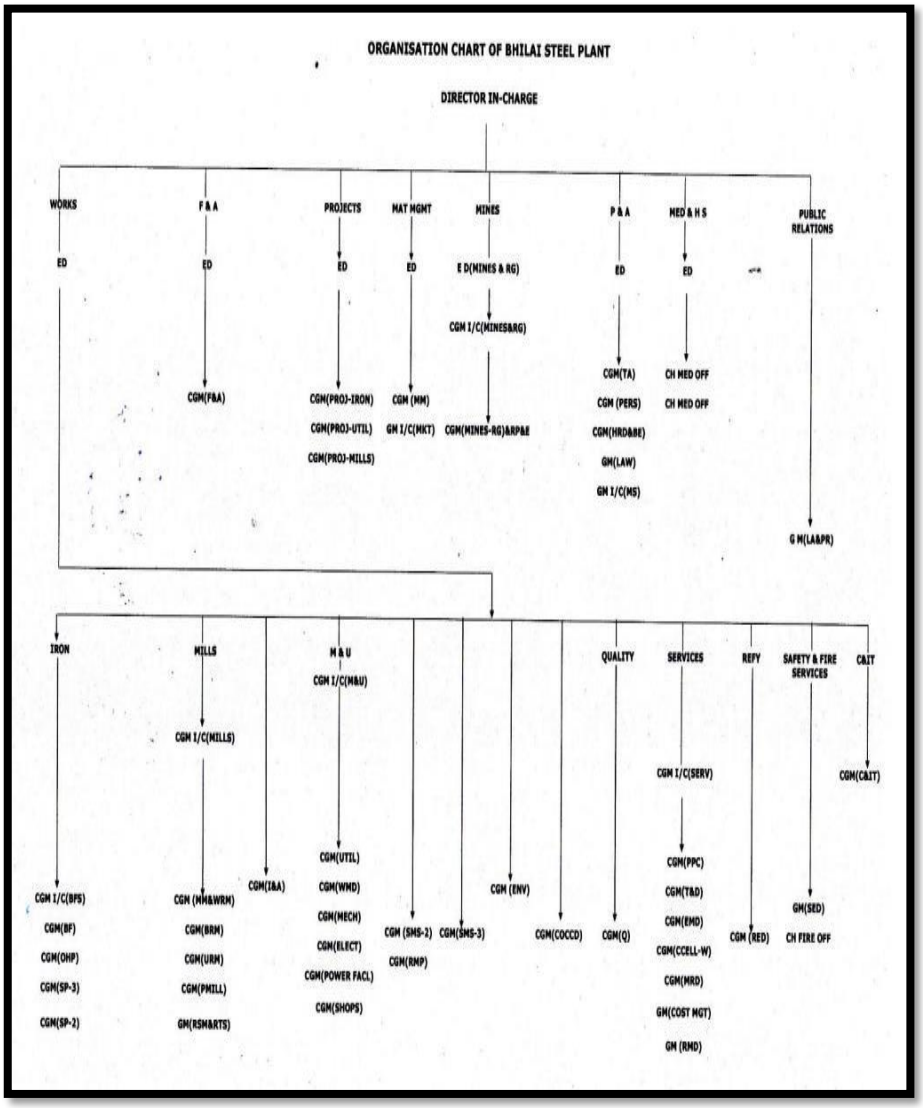


Figure 5: Organizational Structure of BSP

- The Bhilai Steel Plant (BSP) organizational chart shows a hierarchical structure with the **Managing Director** at the top.

- Several **Executive Directors (**eds) who supervise different functional units provide support to the Managing Director, who reports to the Board of Directors. Works, Projects, Material Management (MM), Finance & Accounts (F&A), and Personnel & Administration (P&A) are some of these divisions.
    - **General Managers** (GMs) oversee department divisions and report to the eds. For example, the GM (Works) oversees the Coke Ovens, Rolling Mills, Blast Furnaces, and Steel Melting Shops (SMS). Similarly, the GM (P&A) oversees the Security, Medical, and Personnel divisions.
    - **Deputy General Managers** (DGMs) oversee divisions or sub-departments within their respective regions and report to the General Managers (GMs) further down the hierarchy.

1.2.5 Human Resource Department of Bhilai Steel Plant (BSP)

The human resource department at the Steel Plant is a component of the organization's structure dedicated to managing the workforce efficiently and fostering their professional development and welfare.

a. Human Resource Development

HRD serves as the driving force behind development initiatives to enhance employee skills and knowledge. Through a diverse array of training, programmer ensures that employees are equipped with the requisite expertise to excel in their respective roles These programs cover a broad spectrum of topics and are tailored to address the specific needs of various needs of various departments within the organization.

B. Personnel Department

There are 11 personal offices inside and 3 plants outside the main plant , including the medical, township, and education departments. Each Personnel officer manages approx. 1000 employees. Some of the central functions include.

i. **Recruiting:** This department manages both external and internal recruiting procedures.

   External recruiting entails administering SAIL examinations, Group discussions, and interviews. Internal recruitment comprises promotions, performance assessments, and transfers.

ii. **Manpower Planning**: This component manages the transfer and development of human resources between departments. Employee information is accessed using theHuman Resource Information System (HRIS), and employee-related queries and grievances are handled using E-SANYOG.

iii. **VIP Sections**: These sections manage requests from ministers and influential persons, ensuring compliance with norms and regulations.

iv. **Industrial relations**: Preserving unity and resolving strikes or union operations concerns.

   This division also oversees SC/ST reservation standards and resolves concerns on industrial relations.

v. **Employee Services** includes disciplinary measures, family council help, and inquiry cells

monitoring.

vi. **Final Settlement**: Manages EMPS services and the SAIL pension system.

The Human Resource Department of Bhilai Steel Plant is committed to safeguarding its workers' welfare and professional development while following legal and regulatory standards. It substantially contributes to the organization's overall performance through many activities and projects.

CHAPTER 2: TRAINING AND E-LEARNING INITIATIVES

2.1 INTRODUCTION

Training programs are methodically planned to increase employee productivity and competency across several levels and specialties. The plant's dedication to employee development is clear, from management training to vocational programs. Furthermore, using e-learning platforms such as E-Abhigyan demonstrates the plant's commitment to cultivating a culture of continual learning and professional development. To better understand their influence on organizational performance and employee development, let us investigate these projects in depth.

2.2 TRAINING PROGRAMS

Employee training programs at Bhilai Steel Plant are driven by a commitment to continual development. These programmers seek to provide personnel with the skills and information required for increased productivity and excellence. The **non-executive** training programs take place within the Steel Plant, and **executive** training is held at the Bhilai Management Centre Sector 7 Bhilai.

2.2.1. Management Training Institute (MTI)

MTI, which has been in operation for over 40 years, improves mid and senior executives' managing abilities at SAIL and is well-known throughout Asia for its training, consulting, and research services. It achieved ISO 9001 certification in 1994 and received significant prizes such as the Golden Peacock National Quality Award in1996.

It provides customized training programs and techno-managerial workshops such as piws and leos to SAIL's corporate cadre executives (E6-E8). MTI also disseminates management information through its magazine GROWTH and otherpublications. MTI primarily serves SAIL but also provides services to NTPC and TATA Steel.It has well-equipped lecture halls, multimedia facilities, a gymnasium, and a library. With academic and industrial expertise,

MTI's varied faculty members offer a vibrantlearning environment.

2.2.2 In-house training

In-house training programs include various topics, such as quality principles, communication skills, stress management, and cost control. These programs include interactive approaches like lectures, group discussions,and case studies, with assessments based on written examinations and presentations.

2.2.3 In-plant Training

In-plant training programs include process management, issue-solving, and system awareness. Training subjects include safety regulations, accuracy measurements, maintenance procedures, and knowledge of managementsystems such as OHSAS **(**Occupational Health and Safety Assessment Series) andISO (International Organization for Standardization) standards.

2.2.4 Computer Training

Employees are provided with basic, intermediate, and advanced computer trainingprograms. These programs cover a wide range of software packages, troubleshooting procedures, and advanced topics such as project management.

2.2.5 Workshop training: enhanced engineering skills (EES)

Workshop training attempts to improve workers' engineering abilities. Training modules include various topics, including electrical fault diagnosis, latheoperations, welding processes, and equipment maintenance procedures.

2.2.6 Fresh Entrants training

Training programs are created for new employees, including management trainees,technician trainees, and operative trainees. These programs offer extensive training to newcomers, equipping them with the abilities required for their specific positions.

2.2.7 Management training

Executive training programs serve management personnel, providing specialized training in leadership, decision-making, and strategicplanning.

2.2.8 Vocational Training

Engineering students, MBA/MCA/PG students, and students studying other fieldssuch as law, pharmacy, and physiotherapy can all take advantage of vocational training possibilities. These programs are consistent with the curricular requirements of the corresponding courses. Bhilai Steel Plant's training programs demonstrate a commitment to staff development and organizational success. By providing extensive training opportunities across multiple levels and disciplines, the facility guarantees that its crew remains trained, knowledgeable, and capable of handling the steel's demands.

2.3 E-LEARNING INITIATIVES

E-learning has become important for promoting ongoing learning and development inside organizations. At the Bhilai Steel Plant, numerous e-learning programs have been implemented to improve executives' and non-executive’s abilities and knowledge. These efforts encourage a learning culture, enable professional growth, and keep personnel up-to-date on industry trends and innovations.

2.3.1 E-Abhigyan.

E-Abhigyan is an online learning platform developed by the Steel Authority of India Limited (SAIL. Employees may access e-learning courses including technical skills, management concepts, and safety measures via E-Abhigyan. This platform allows individuals to increase their knowledge and abilities attheir speed, without affecting their daily routine.

The platform has a variety of features and materials geared to different learning needs:

2.3.4 SAIL Pathshala: E-Learning Scheme for Executives

Continuous learning and development are critical for organizational progress, and SAIL recognizes this by launching the "SAIL-Pathshala: E-Learning Scheme for Professional Development of Executives." This initiative strives to foster a learning culture inside the firm by providing e-learning courses. Executives are encouraged to choose courses to improve their skills and expertise. Department heads and reporting officers are important in pushing their subordinates to investigate relevant topics and adopt modern technology and managerial ideas for personal and professional development.

2.3.5 BSP e-Pathshala: An E-Learning Program for Non-Executives

In keeping with the emphasis on continual learning and development, the "BSP e- Pathshala: E-Learning Scheme for Professional Development of Non-Executives" has been launched. This plan allows non-executives to engage in e-learning courses of their choiceto improve their skills and expertise. Non-executives are encouraged to researchrelevant topics and adopt emerging technology and concepts, as is the case with executives, to further their careers.

Courses last from one week to 48 weeks.

1.3.12 E-journals and magazines

Aside from official e-learning classes, Bhilai Steel Plant offers e-journals and e-magazines to keep staff updated on industry trends, innovations, and best practices. These materials cover many steel-related subjects, including metallurgy, safety engineering, renewable energy, and electrical engineering. Employees whosubscribe to these e-publications may remain current on the newest advancements intheir professions, increasing their learning experience.

Finally, the e-learning activities of Bhilai Steel Plant demonstrate a commitment to cultivating a culture of continual learning and growth among its employees. By utilizing digital platforms and resources, the plant provides its workers with the information and skills required to perform in their positions and contribute to the Steel Plant.

CHAPTER 3: INTRODUCTION TO RESEARCH

3.1 INTRODUCTION

According to Mawita (2000) training can be described as a systematic process of developing knowledge, skills, attitudes, and technology needed to assist a person to perform in his present job. It helps the individual to match up to the requirements of their jobs (Mawita, 2000), (Chang, V. (2016). According to E-learning for academia and industry research paper-By offering staff training, benefits for organizations are as follows. First, employees can complete their tasks quickly and efficiently without making mistakes that can cost the organizational reputation and financial loss (Sveiby, 1997). Second, products and services can be enhanced since the team for research and development, sales, marketing and operations have better competency, skills and knowledge to ensure that products and services are continuously improved (Day, 1994). Third, the organization can design and develop better strategies, new products, and services as a result of the improved level of overall competency and collaboration (Gould, 2009). An organization can become an learning organization since the employees can learn from their previous errors, accelerate their progress and improve on their work performance as individuals and units. More time and effort can be used on development of the forward-thinking plans to reduce costs, errors and improve on collaboration, team work and market strategies (Treacy & Wiersema, 1997). In this way, it offers a greater level of competitiveness over its rivals. Human capital can include knowledge, skills, competencies, relationships, and creativity implicit in an organization's workforce (Reynolds et al., 2002).

Furthermore, according to (Chang, V. (2016) facilitating better learning and training activities, the use of online resources has been blended successfully with education. One of these areas is known as e-learning, which offers the online delivery of information, communication, education and training (Sloman, 2001). Bhilai Steel Plant's attention to staff training and

development is critical to developing a competent workforce. Training programs and e-learning approaches are critical in providing workers with the skills and information theyneed to succeed in their positions and contribute successfully to the organization's goals. By investing in staff development, the Bhilai Steel Plant displays its dedication to continual improvement and innovation, ensuring that its workforce is flexible and capable of addressing the industry's changing expectations.

This study looks into the complex terrain of training programs and e-learning efforts at the Bhilai Steel Plant. By scrutinizing these characteristics, the research hopes to guarantee that training efforts closely correlate with the plant's unique work needs, maximizing their influence on employee performance and organizational success.

3.2 LITERATURE REVIEW

This literature analysis examines the influence of training and e-learning on employee performance and productivity in the Steel industry. These studies look at various training approaches, such as on-the-job and e-learning programs, and their effectiveness in improving skills and work performance. They emphasize the need for ongoing learning anddevelopment to enhance organizational results and competitiveness. These studies provide useful insights into training techniques and tactics that might enhance the Bhilai Steel Plant's operations and workforce.

1. Al-Sous et al., (2023) titled “Integrated e-learning for knowledge management and its impact on innovation performance among Jordanian manufacturing sector companies” indicates that the integration of e-learning with knowledge management systems can lead to a notable enhancement in knowledge transfer and organizational performance. Knowledge-oriented leadership has been proven to have a favorable impact on knowledge management and innovation performance in a study involving 57 industrial enterprises in

Jordan. On the other hand, innovation performance was negatively impacted by organizational learning. The results imply that the relationship between leadership, organizational learning, and innovation success is mediated in large part by efficient knowledge management.

2. (Palo & Padhi, n.d.) 2023 Measuring effectiveness of TQM training 203 Measuring effectiveness of TQM training: an Indian study investigates the critical role that ongoing training plays in enabling the effective application of Total Quality Management (TQM) in a public sector company that produces crude Steel in India, similar to Bhilai Steel Plant. The study finds that TQM training significantly improves employee skills, performance standards, teamwork, awareness, and commitment to quality through primary survey data analysis using Pearson's Correlation Coefficient. Nonetheless, it implies that multi-skill development, customer value training, and communication competencies need more attention. More funding, enthusiasm, and support from top management and their commitment are necessary for a successful TQM implementation. The importance of ongoing training in promoting a culture of quality improvement and efficiency increase in Steel manufacturing companies is highlighted by this study.

3. Githuku et al., (2022) titled “Learning Organization Culture and Firm Performance: A Review of Literature” indicate that significance of establishing a learning organization culture to enhance company performance and competitiveness, indicating a favorable influence on organizational outcomes. Understanding the link between organizational culture and performance helps guide training and e-learning programs at Bhilai Steel Plant to improve job performance and productivity.

4. (Rizwan Naqvi & Sareen, 2022) titled “Leveraging Online Learning for Jumping on the Bandwagon: Qualitative Study of Mega Steel Giant Organization” indicates that incorporating the ADDIE and Kirkpatrick models into training frameworks has a

noteworthy effect on the performance of organizations. At Jindal Stainless Steel, quality improvement and cost savings were achieved by concentrating on the training requirements analysis and evaluation phases, according to a case-based investigation of training instrumentality. This emphasizes how crucial methodical training strategies are for improving staff competencies and corporate results.

5. Nawarathna et al., 2021) titled "The Impact of Human Resource Development on Continuous Improvement in the Steel Industry" has highlighted that On-the-job training improves employee performance in manufacturing, emphasizing the need for well-structured training techniques This study supports Bhilai Steel Plant's focus on training and development by providing insights into optimizing training techniques for increased staff efficiency and production.
6. Giannakos et al., (n.d), 2021 titled "Systematic Literature Review of E-Learning Capabilities to Enhance Organizational Learning" indicate that the research can be used at Bhilai Steel Plant by examining skill shortages and training preferences at JSW Steel Ltd. In Salem. It explores how markets operate and what training modifications are required. Even though skill gaps are typical in marketplaces with intense competition, intervention might be necessary if resource allocation is not optimal. The primary forces behind the evolution of skills requirements are organization, society, technology, and demography. Because information is disseminated and learning takes time, market movements may be gradual. A thorough grasp of market dynamics is necessary for effective policy intervention. The study emphasizes the value of empirical knowledge and prompt intervention to overcome skills deficiencies.

7. Dash & Rath, (2021) titled "Knowledge Management Practices in Steel Industries of India: A Comparative Analysis of Public and Private Steel Industries", indicate that knowledge management procedures in the Indian Steel industry, taking into account businesses in the

public and private sectors. Operating in a mixed economy, the Indian Steel industry is seeing tremendous development in both Steel exports and output. This study assesses how knowledge management practices (KMP) affect Steel companies' performance through secondary data analysis. The study evaluates the benefits and drawbacks of KMP adoption in both public and private Steel firms by comparing data from prior years. This report provides insights into how well KMP works to boost competitiveness and growth in the Indian Steel sector.

8. Urbancová, Vrabcová, Hudáková, & Petrů, G. J, (2021) titled "Effective training evaluation: The role of factors influencing the evaluation of the effectiveness of employee training and development" indicate that the variables affecting the assessment of employee development and training efficacy. A questionnaire survey was used to gather information from 207 Czech organizations. The results show that employees prefer to self-evaluate their training days and supervisors' subjective evaluation methods. The COVID-19 pandemic has altered HR priorities and trends considerably for the year 2021. The business sector, organizational size, presence of an HR department, and if the corporation is a member of a bigger group are all factors that influence the review process. This study emphasizes how crucial it is to have specific learning objectives and quantifiable outcomes when evaluating the efficacy of training

9. Fake & Dabbagh, (2021), titled "The Personalized Learning Interaction Framework: Expert Perspectives on How to Apply Dimensions of Personalized Learning to Workforce Training and Development Programs" indicate that students who receive individualized learning have more control over their education in both K–12 and higher education. It shortens learning times, promotes lifetime learning, and aids in the development of new abilities. Its use in workforce development and training programs is, nevertheless,

understudied. Definitions and applications differ as to what constitutes personalization, who performs it, and how. According to expert input, personalized learning is flexible, choice-driven, learner-centered, and driven by social interactions and content. A five-level personalized learning interaction framework (plif) based on Moore's Theory of Interaction is suggested to organize personalized learning in Workforce Training and Development Programs.

10. (Zahari et al., 2020) Knowledge Management and e-learning in Organisations indicate e-learning as a tool for organizational learning, focusing on how it helps with competency development. It highlights the value of knowledge management (KM) in e-learning projects and emphasizes how essential KM is to exchanging and applying knowledge. Organizations can improve learning cultures and obtain a competitive edge by capturing and exploiting structured knowledge. The results highlight how important it is for businesses to generate and use new information in order to survive. The study's methodology incorporates organizational structures, technological applications, procedures, and concepts to facilitate knowledge sharing and alignment with business objectives. This study supports the goals of determining the Bhilai Steel Plant's training requirements and assessing e-learning strategies by demonstrating how efficient knowledge management and e-learning can raise output and performance.

11. Karim, (2019), titled “Impact of different training and development programs on employee performance in Bangladesh perspective,” indicates that employee performance (EP) is significantly impacted by training and development initiatives, such as career development training (CDT), environment, health, and safety training (EHST), and orientation training (OT). Nevertheless, it was discovered that there was no meaningful connection between Employee Performance (EP) and Job Training (JT). These results demonstrate the critical impact of some training initiatives in improving worker performance in businesses.

12. (Supriatna & Bohlen Purba, 2019) The Effect of Training Development, Motivation, and Compensation on the Employee's Work Productivity at Pt. Indojapan Steel Center. Indicate that training and development, motivation, and remuneration have a major impact on the job productivity of employees at PT Indojapan Steel Center. Multiple linear regression analysis and quantitative methodologies were used in the study, which involved 91 personnel. Results show that these variables account for 87.9% of the variation in labor productivity. Training, motivation, and pay are important determinants. However, outside variables not included in the study account for 12.1% of the difference.
13. (Guan & Frenkel, 2019) How perceptions of training impact employee performance: Evidence from two Chinese manufacturing firms indicates how firm training affects semi-skilled manufacturing workers' job performance in Chinese manufacturing companies. A time-lag survey method was used to gather data from 348 supervisor-subordinate dyads. The results show that HRM strength moderates the links between task performance, organizational citizenship behavior, and work engagement. In contrast, work engagement mediates the association between training and in-role task performance. According to the study, the effects of training on employee performance are amplified by a robust HRM system. These results suggest that improving the HRM system and emphasizing training initiatives that encourage employee engagement may improve job performance at Bhilai Steel Plant.
14. Chavaha et al. (2018), titled "The Impact of Human Resource Development on Continuous Improvement in the Steel Industry," indicated that the adoption of human resource development (HRD) strategies in the Steel sector has a beneficial impact on employee performance continuous improvement (CI). Employees' abilities can be improved by HRD efforts, including seeking out opportunities for personal growth, sharing knowledge across all levels, and learning from both positive and negative experiences. This progress is further

aided by managers' adoption and application of organizational learning, which raises worker effectiveness.

15. (Li et al., 2017) Measuring the Learning Effectiveness of Serious Gaming for Training of Complex Manufacturing Tasks indicates the teaching of manufacturing activities is compared between standard paper-based learning methods and a serious game called Teaching Game in this study. Twenty workers studied the instructions and took tests as part of a randomized controlled study. With no discernible difference in factual information, the Training Game was more helpful for procedural knowledge. It was noted that the Training Game increased engagement levels. According to the results, teaching procedural knowledge in complicated manufacturing with a serious game is a successful strategy. Using cutting-edge e-learning strategies, this research may help the Bhilai Steel Plant's training and development programs and increase productivity.
16. Adari & Tulasee Naidu (2017), "Employee success through training and development: a case from Visakhapatnam Steel Plant" indicate that a robust and affirmative correlation among employee success (ES), workforce development (ED), and employee training (ET) at the Visakhapatnam Steel Plant. The study discovered that effective training and development techniques significantly contribute to increased employee performance across various industries, based on empirical data from 321 genuine responses. According to the findings, spending money on staff growth and training programs can increase workforce productivity and success in fast-paced work situations.
17. Brull et al., (2017), titled "Using Gamification to Improve Productivity and Increase Knowledge Retention During Orientation," indicate the impact of gamification in orientation training. It emphasizes the benefits of engagement, fun, and enhanced

information retention, implying its importance in improving e-learning practices at the Bhilai Steel Plant.

18. Chang, (2016) titled “Review and discussion: E-learning for academia and industry”, indicate that e-learning and suggests that interactive learning be used as a suggested technique for staff training in both academia and industry. Interactive learning is centered on the integration of in-person and online instruction to make sure that students' interests are piqued, their progress is tracked, and tutors are available to offer guidance and feedback as needed to reach learning objectives. Discussions regarding the applications of interactive learning in academia and industry have been used to showcase learning activities and types. To illustrate the value of interactive learning, here are five instances of its successful implementation. Good effects to support the good results for trainers and learners have been reported in RBS, smes utilizing SAP, Leeds Beckett University, University of Cambridge, and University of Greenwich.
19. Raza, (n.d.) 2015 titled “Degree Programme in International Business Impact of Training and Development on Employee Performance” indicate that that training has a favorable influence on employee performance, especially for unskilled and less experienced employees, and emphasizes the usefulness of training techniques and instruments. This report focuses on the influence of training and development programs on staff performance at Bhilai Steel Plant, which aligns with the study's goals.
20. (Schack et al., n.d.) 2015 The effectiveness of e-learning An explorative and integrative review of the definitions, methodologies and factors that promote e-Learning effectiveness Indicates the success of e-learning is examined in this integrative review, which reveals a variety of definitions and assessment techniques. Results show that "learning outcome" is the main indicator of effectiveness, and it is mostly measured by pre- and post-tests. An empirical study on science teachers highlights the difficulties in using e-Learning to

improve teaching performance and the drawbacks of depending only on predetermined learning objectives. The study suggests a model that classifies context, e-Learning solutions, and user attributes as important determinants of effectiveness. The Bhilai Steel Plant can benefit from improving training efforts' efficiency and efficacy through the comprehension and application of efficient e-Learning methodologies. This emphasizes how crucial it is to adjust measurement initiatives to the requirements of stakeholders.

21. Persico et al., (2014), titled “Adapting the technology acceptance model to evaluate the innovative potential of e-learning systems”. According to research it has used the Technology acceptability Model (TAM) to evaluate the creative potential of e-learning systems. It emphasizes the need to include all system features and user acceptability. It includes data on real usage and efficacy.
22. Batalla-Busquets & Martínez-Argüelles, (2014) titled “Determining factors in online training in companies” indicate that the implementation of e-learning in businesses is not only influenced by conventional elements such as workforce education level or firm size. Rather, it is strongly related to elements like the widespread use of digital technology, the ability to innovate using these technologies, and the flexibility of work procedures. This starts a positive feedback loop that makes practical workplace applications and digital learning stronger, which eventually leads to a more digitalized work environment.
23. Rolstadås, (2013) titled “Experience from continuing education using e-learning” indicate that Hybrid learning approaches, which combine conventional and technology-enhanced methods, have proven beneficial. Offers insights on effective e-learning methodologies for training and development, relevant to Bhilai Steel Plant efforts.
24. Elnaga & Imran, (2013), paper titled “The Effect of Training on Employee Performance”, has indicated that employee performance in companies is greatly improved by training and development, with a 72.6% rise noted. The significance of funding initiatives for human

resource training is highlighted by this favorable link. This association is explained by the paper using secondary data sources, including textbooks and reports on empirical research, and Victor Vroom's expectation theory. The study aims to investigate the impact of employee performance on training, and in order to determine the effectiveness of training and development programs, secondary sources are analyzed as part of the approach

25. De Grip & Sauermann, (2013) The effect of training on productivity: The transfer of on-the-job training from the perspective of economics identifies a variety of findings: some research show no link, others show a positive correlation, and some show a negative one. Training practices' impact on productivity is highlighted in the review. By promoting various analytical techniques to better investigate this link, it makes recommendations for future study topics. This evaluation emphasizes the significance of comprehending how staff productivity is impacted by training programs in the context of the Bhilai Steel Plant. It provides insights for improving training procedures within the plant to maximize productivity findings.
26. (Els, 2012), The evaluation of a leadership development center in a manufacturing organization in the Steel industry indicates how well a Leadership Development Center (LDC) at a South African Steel manufacturing company enhances middle-level managers' leadership competencies. Conceptualizing leadership development and Development Assessment Centers (dacs), investigating LDC methods, and assessing program outcomes are among the goals. Pre- and post-test results using the Leadership Behavior Inventory (LBI-2) revealed statistically significant improvements in leadership abilities, with the hardest areas to improve being vision and systems competencies. This study emphasizes the value of focused leadership development programs, which could help Bhilai Steel Plant by raising managerial standards and increasing output.
27. Alsabawy et al., (2012), A model to measure e-learning systems success, indicates that to

overcome the difficulty of gauging the effectiveness of information systems in the e-learning context, the chapter suggests an assessment methodology model. The study adds a thorough framework by combining information systems success models with previously published material. The results emphasize the need for reliable assessment techniques for online learning environments. A detailed analysis of the literature on e-learning success is part of the methodology. Determining success metrics and evaluating their suitability are among the goals. The suggested model provides an organized method for assessing the efficacy of e-learning projects. This methodology is applicable to the Bhilai Steel Plant and offers a methodical way to gauge how e-learning approaches affect employee growth and training.

28. Wilson, (2012) Effective professional development for e-learning: What do the managers think? Identifies the structure, offerings, and efficacy of the institutional approach to e-learning professional development at New Zealand's vocational education institutions. Through a survey of the literature and interviews with thirteen e-learning managers, the study sheds light on different forms of professional development, emphasizing the most successful ones as skill development and teamwork. The data was analyzed using a grounded analytical approach, which helped to uncover important concepts about assistance, information, and training. These results imply that effective e-learning initiative execution requires a complete approach to professional development. The findings and methodology of this study can guide similar projects at Bhilai Steel Plant, improving training and development plans for increased output.
29. Sepulveda, (2005) paper titled “Training and Productivity: Evidence for US Manufacturing Industries” highlighted that official training initiatives are essential for boosting industry productivity growth. According to research, on-the-job training increases productivity by

positively impacting human capital accumulation, particularly in sectors with greater human capital. On the other hand, off-the-job training has no appreciable effects on industrial productivity. The results highlight the significance of customized training approaches in promoting human capital growth and enhancing overall efficiency across diverse industries.

30. Rolstadas & Thoben (2005), titled "An E-learning experiment in manufacturing strategy," indicate that the GEM initiative, which sought to improve the e-learning of manufacturing strategy, has produced insightful results. The European Commission provided funding for the project, which created a five-day e-learning demonstrator on production management in the digital age. The study collected feedback globally using standardized questionnaires, demonstrating the value of current IT-based training in fulfilling the demands of the manufacturing sector and showcasing the efficacy of the instructional approach.
31. Birdi, (2005) titled "No idea? Evaluating the effectiveness of creativity training," indicate that creativity training workshops improved creative knowledge, attitudes, workplace idea development, and execution in a moderate but substantial way. Creativity initiatives improve knowledge and motivation. Effective training might be hindered by an unfavorable work environment, missing administrative support, or an unsupportive climate for innovation.
32. Liyanage & Poon (2003), titled "Technology and innovation management learning in the knowledge economy: A techno-managerial approach," indicate that a techno-managerial strategy combines general management ideas with technology management practices. E-learning systems are recognized for providing timely access to industry advances while establishing practitioner networks. This article examines the influence of e-learning efforts and technology management education on training and development techniques in knowledge-based sectors.

33. Colarelli & Montei, (1996) titled “Some contextual influences on training utilization,” indicate that The goals of this study were to create a conceptual framework for comprehending how training is used and to empirically explore the framework's hypotheses on the function of context in training use. Four theories were developed and tested using information gathered from 53 establishments. The findings showed that using Jonnal training programs was connected with turnover, organization size, and technological complexity; the strongest correlation was found between technical complexity and training utilization. Research and practice implications are discussed in the article's conclusion.

3.4 RESEARCH GAP

We intend to fill gaps in present research by examining how different training programs impact workers' work performance and understanding the efficacy of e-learning efforts inside the plant. By investigating these themes, we want to get insights that can improve productivity and efficiency in the Steel factory environment.

3.4.1 Linking training to Job Performance in the Bhilai Steel Plant.

The existing research landscape lacks a thorough knowledge of how training programs at the Bhilai Steel Plant influence job performance. There is a need to investigate and determine the processes by which diverse training programs lead to increased employee work performance. Understanding these connections is critical for increasing production and efficiency in the plant.

3.4.2 Evaluating E-learning impact in the Bhilai Steel Plant.

While data on the efficiency of training programs exists, nothing is known regardingthe impact of e-learning efforts at the Bhilai Steel Plant. More research is needed to analyze the effectiveness of e-learning approaches, identify their strengths and weaknesses, and determine their overall influence on employee learning, skill development, and job performance.

3.5 RESEARCH OBJECTIVES

Our goal is to look at how training approaches and e-learning methodologies. Help to improve plant productivity and performance. We hope to gain insights into howalternative training techniques and the impact of e-learning might improve staff learningand skill development for the benefit of the Steel Plant.

3.5.1 To analyze the impact of trainingprograms, on job performance.

This study attempts to identify the essential aspects that lead to increased productivity and performance in the plant by studying various training techniques, content, delivery modalities, and employee outcomes.

3.5.2 To study the impact of effective e-learning techniques on employee learning outcomes and job performance.

This goal investigates the efficacy of e-learning strategies at the Bhilai Steel Plant. The study intends to discover best practices in e-learning design, delivery, and implementation and their influence on employee learning outcomes and job performance. By assessing several e-learning activities inside the plant, this research hopes to give insights into optimizing learning tactics for optimal efficacy and efficiency.

3.6 RESEARCH METHODOLOGY

The research investigates the efficacy of training programs and e-learning initiatives in improving work performance among Bhilai Steel Plant personnel. It aims to find patterns and relationships between training, e-learning use, and job performance measures.

3.6.1 Population

The study's target demographic is workers at the Bhilai Steel Plant. Adequate representation of the workforce is ensured by this inclusive strategy.

3.6.2Sample Size

To ensure adequate representation of the population, the questionnaires will be sent to all departments in order to ensure proportionate participation.

3.6.3 Sampling Methods and Techniques

Random sampling will be used for participants from various departments and job roles. This technique reduces bias and improves the generalizability of the results by ensuring that each population segment is proportionately represented in the sample.

3.6.4 Data Collection

Information on workers' opinions, attitudes, and experiences with training programs and e-learning initiatives will be gathered through the use of a standardized questionnaire. To increase response rates, the questionnaire will be given to a chosen group of people along with clear instructions and reminders.

3.6.5 Questionnaire Designing

Great care will go into creating a questionnaire that will elicit pertinent data about e-learning initiatives and training programs. To ensure thorough data collection, it will contain questions meant to extract participants' opinions, experiences, and attitudes. An all-encompassing approach to data gathering and analysis will guide the study process, allowing for a detailed investigation of the connections between work performance, e-learning, and training at the Bhilai Steel Plant.

CHAPTER 4: DATA ANALYSIS

4.1 Hypotheses

H1 There is a significant impact of training programs on job performance.

H2 There is a significant impact of effective e-learning techniques on job performance.

H3 There is a significant impact of effective e-learning techniques on employee learning outcomes.

4.2 JOB TITLE

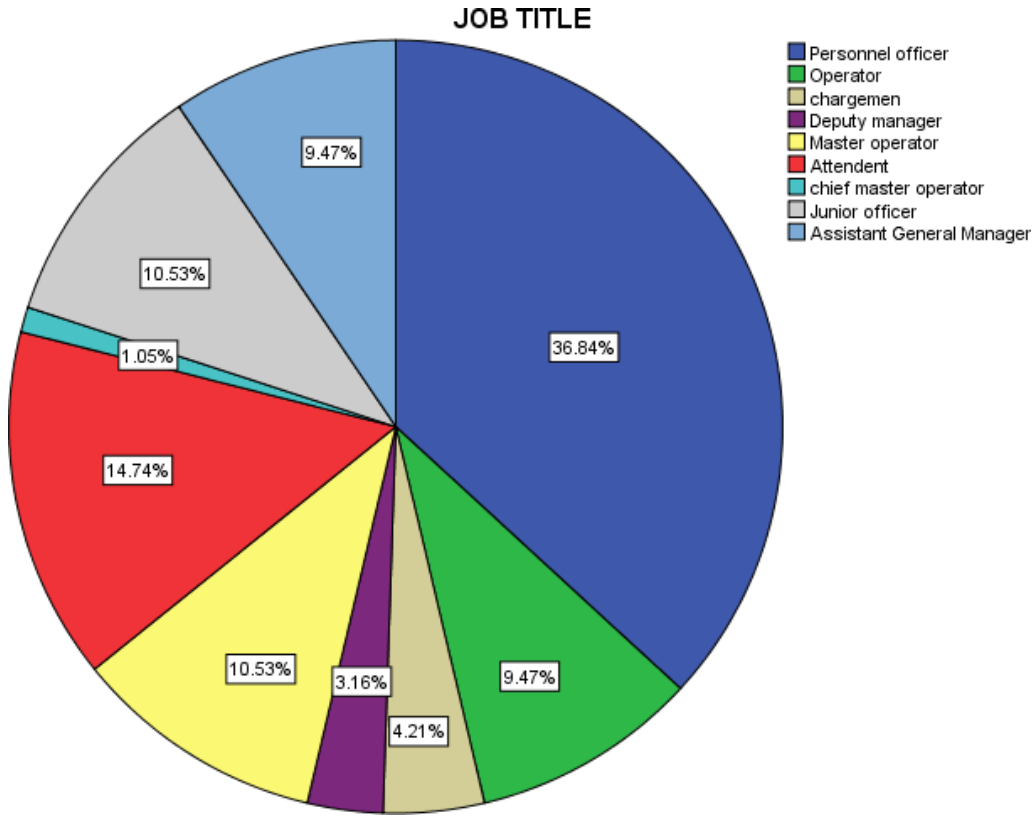
Table 1. Employees who filled the questionnaire

JOB TITLE

	Percent
Personnel officer	36.8
Operator	9.5
chargemen	4.2
deputy manager	3.2
master operator	10.5
Attendant	14.7
chief master operator	1.1
junior officer	10.5
Assistant General Manager	9.5
Total	100.0

Source: Authors Compilation

Figure 1 Percentage of employees filled the questionnaire



Source: Authors Compilation

The no of employees filling the questionnaire is 95 i.e. Personnel officer, Operator, chargeman, Deputy manager, Master operator, Attendant, chief master operator, junior officer, Assistant General Manager.A varied distribution of participants across different responsibilities within the firm is revealed by the study of job titles among the respondents. The biggest frequency of respondents—36.8%—among the 95 total respondents are personnel officers, followed by operators (9.5%). The lesser but noteworthy percentages of chargemen, deputy managers, and master operators are 4.2%, 3.2%, and 10.4%, respectively. The information also includes representation from attendants, chief master operators, junior officers, and assistant general

managers, albeit at lower rates ranging from 1% to 10.5%.The cumulative analysis shows the diversity of participation among various job titles, providing a thorough portrayal of the labor force. An overview of the demographics of survey participants is given by the accompanying pie chart, which graphically represents the proportionate distribution of respondents among the different job titles. This thorough research helps to clarify the variety of responsibilities that exist inside the company and offers insightful information for initiatives or targeted interventions that are designed for job categories.

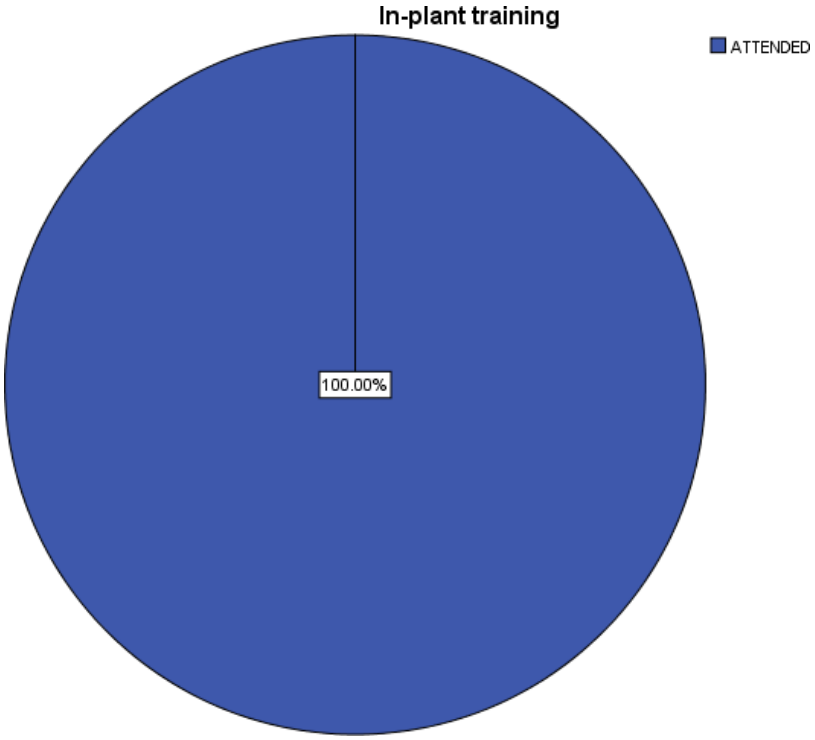
4.3 TRAINING PROGRAMS

Table 2 No. of employees attended in-plant training

In-plant training

	Frequency	Percent
ATTENDED	95	100.0

Figure 2 Pie chart showing percentage of employees attended in-plant training



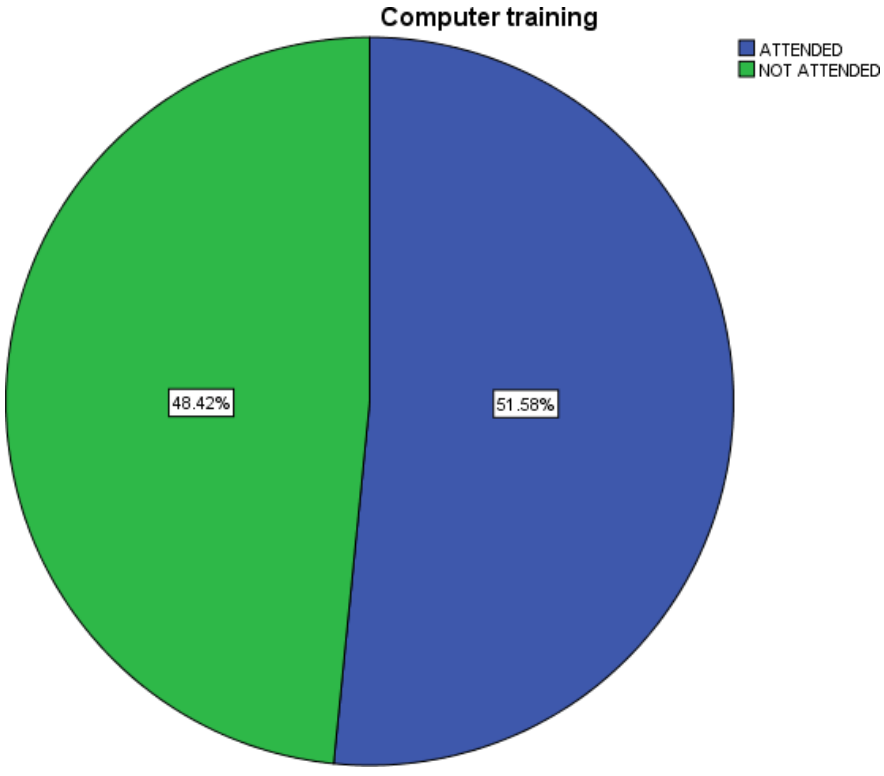
Based on the data, all research participants—all 100 percent of them—had participated in in-plant training. The organization's overall involvement rate in in-plant training programs is highlighted by this finding. The complete attendance shows a strong commitment on the part of the staff to on-the-job training efforts that expand their knowledge and skill sets. It is important to fully utilize in-plant training opportunities as they offer practical skills and hands-on learning experiences that are relevant to employees' jobs and responsibilities.

Table 3 No. Of employees attended computer training

Computer training

	Percent
ATTENDED	51.58
NOT ATTENDED	48.42
Total	100.0

Figure 3 Pie chart showing percentage of employees attended computer training



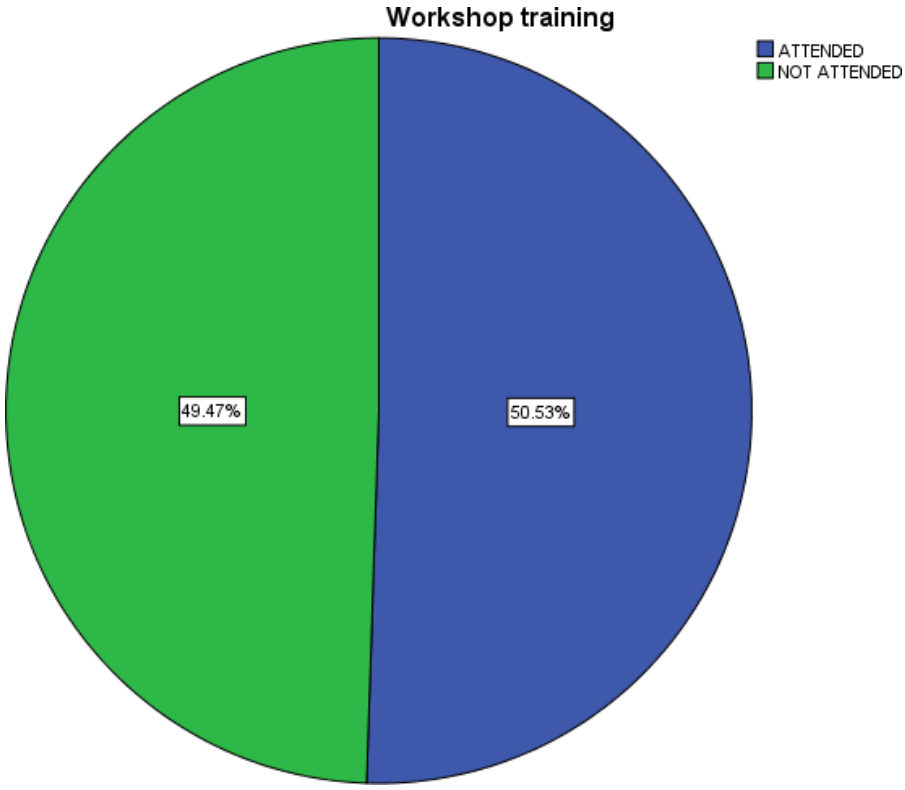
The analysis reveals that 51.58% of workers have participated in computer training, compared to 48.42% who have not. The results show that a considerable portion of the workforce participates in computer training programs. Computer skills are important and relevant in the organization, as evidenced by the relatively high proportion of attendance. It shows that employers are proactively adopting new technology and ensuring that staff members have the computer literacy they need to perform their jobs more effectively.

Table 4 No. Of employees attended workshop training

Workshop training

	Percent
ATTENDED	50.53
NOT ATTENDED	49.47
Total	100.0

Figure 4 Pie chart showing percentage of employees attended workshop training



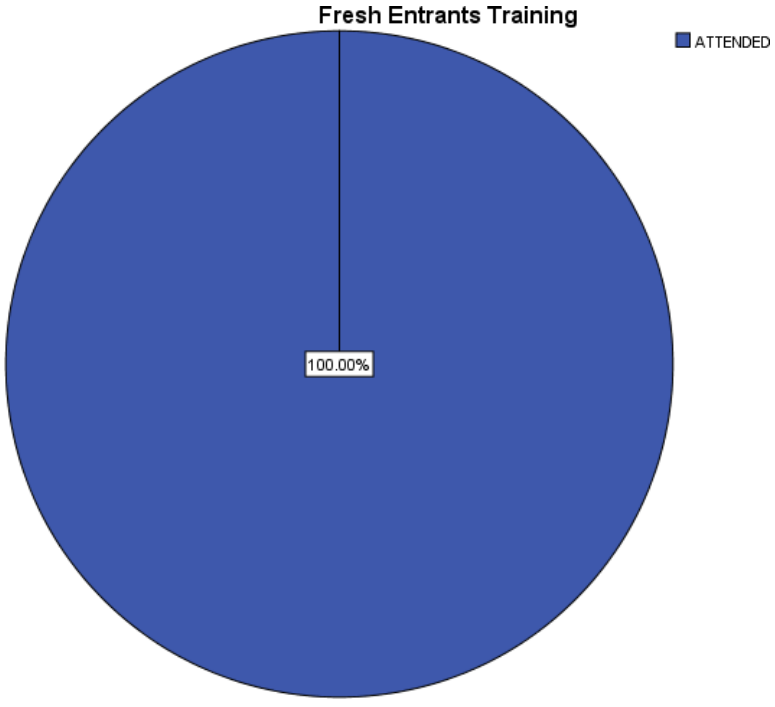
Of those who responded, 50.53% had workshop instruction and 49.47% had not. This result suggests a distributed rate of participation in the organization's workshop training programs. It is clear from the comparatively equal attendance distribution that workshop-based learning approaches are valuable and effective in helping employees transfer information and build new skills. The statement implies that employee capabilities and performance are enhanced

Table 5 No. Of employees attended fresh entrants training

fresh entrants training

	Frequency	Percent
ATTENDED	95	100.0

Figure 5 Pie chart showing percentage of employees attended fresh entrants training



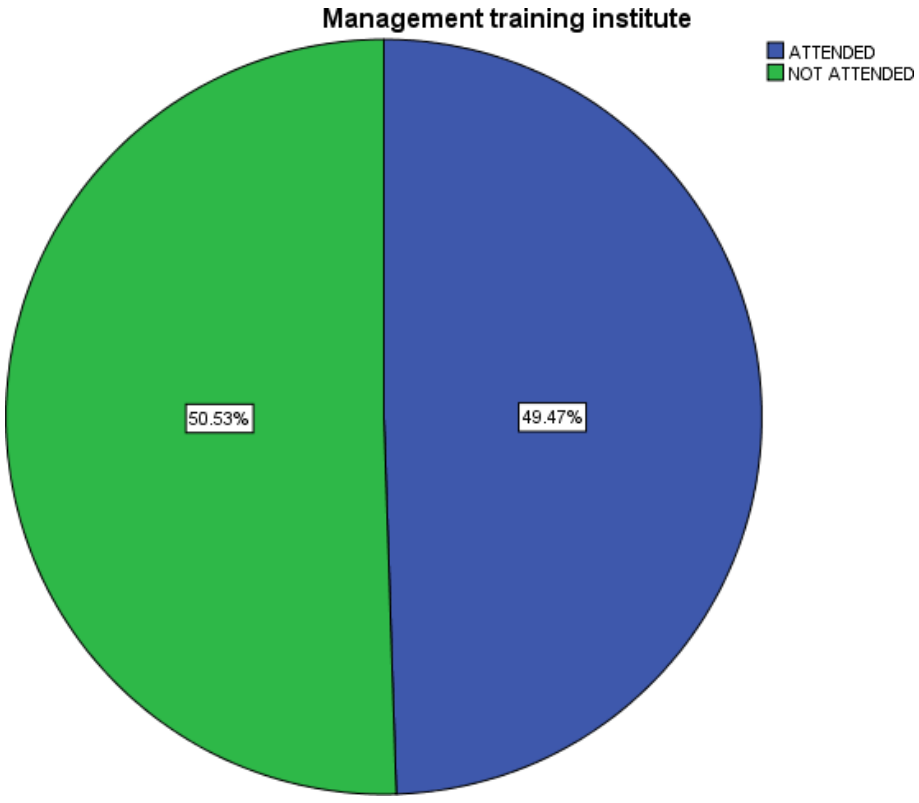
The analysis reveals that all employees—100% of them—have participated in new hire orientation. This data shows that the organization's new hire training programs have an exceptionally high participation rate. The nearly uniform attendance rate emphasizes how crucial orientation and onboarding programs are to helping new hires fit in with the company culture and acquire the information and abilities they need to be successful in their positions. It exhibits a proactive strategy for developing talent and creating a welcoming atmosphere for recent personnel.

Table 6 No. Of employees attended management training institute

Management training institute

	Percent
ATTENDED	49.47
NOT ATTENDED	50.53
Total	100.0

Figure 6 Pie chart showing percentage of employees attended management training Institute



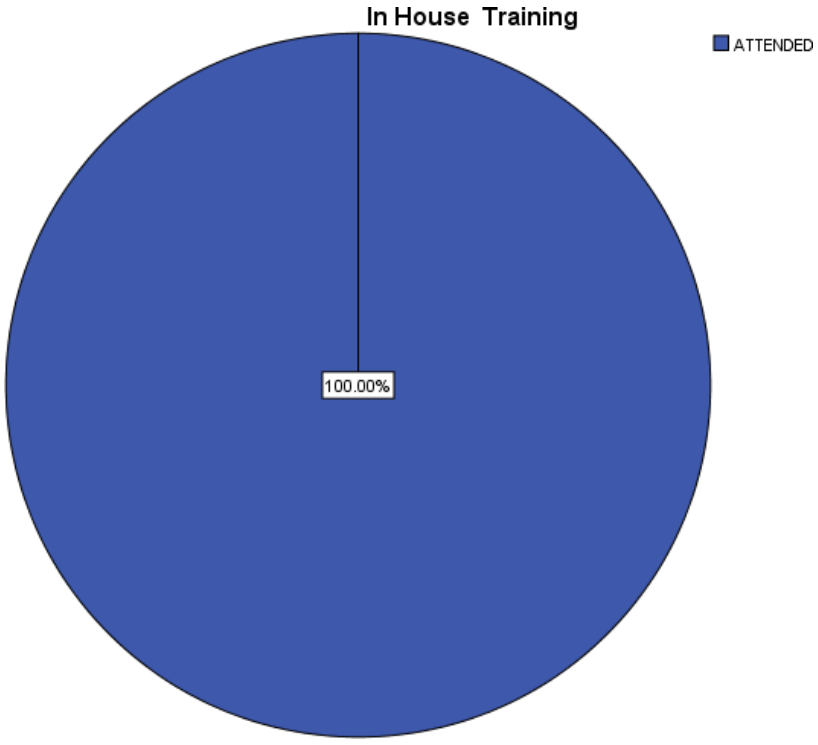
49.47 percent of the polled employees had gone to management training, compared to 50.53 percent who hadn't. This result suggests an even participation rate in the organization's management training courses. A considerable proportion of the workforce may be able to participate in management institute training programs, and they are regarded as valuable chances for professional growth and leadership development based on the nearly equal attendance distribution. It shows that the company is dedicated to supporting staff members At all organizational levels in their professional development.

Table 7 No. Of employees attended in house training

In-house training

	Percent
ATTENDED	100.0

Figure 7 Pie chart showing percentage of employees attended in house training



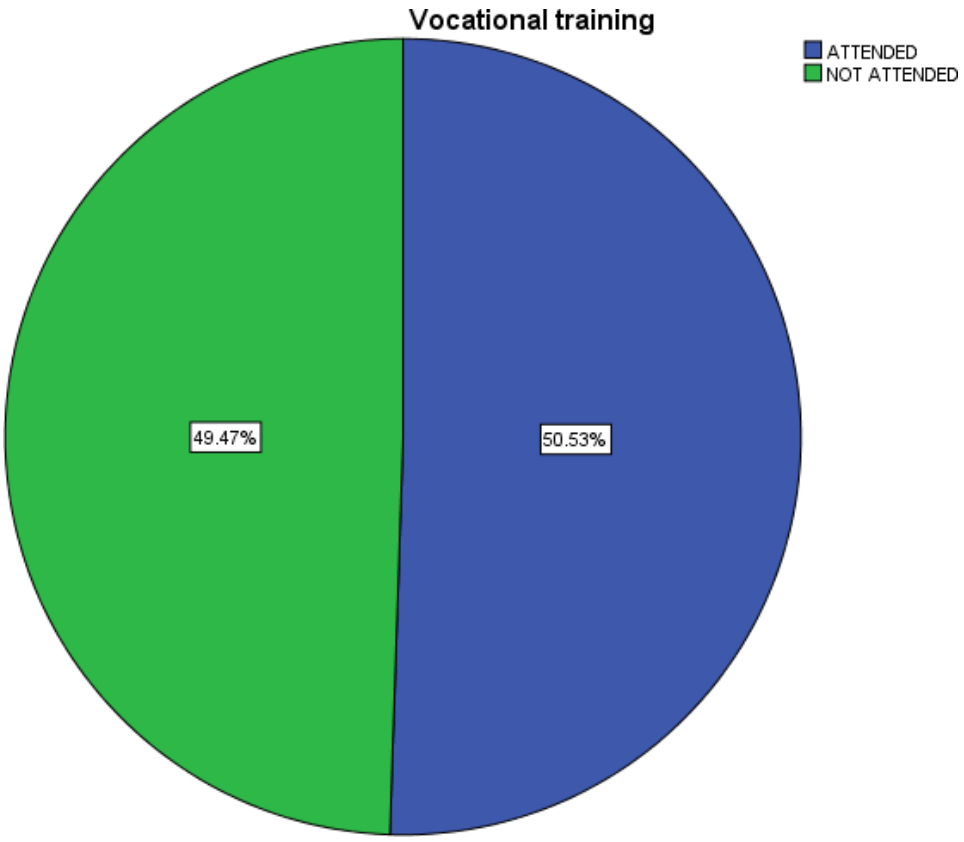
100% of the sample, took part in internal training initiatives. The elevated degree of involvement suggests a robust dedication on the part of the staff to augment their competencies and expertise within the company. The company's investment in staff development and its efforts to promote a culture of continuous learning are positively reflected in the 100% attendance rate for in-house training.

Table 8 No. Of employees attended vocational training

Vocational training

		Percent
Valid	ATTENDED	50.53
	NOT ATTENDED	49.47
	Total	100.0

Figure 8 Pie chart showing percentage of employees attended vocational training



Of the 95 workers polled, 49.47 workers, or 50.53% of the total, participated in vocational training.

Furthermore, 47 workers—or 49% of the total—took part in vocational training. This evenly distributed involvement points to a high level of interest among staff members in vocational training programs, which may reflect the applicability and efficacy of such training efforts in meeting their demands for skill development. The almost equal split of registrants between the two groups demonstrates the variety of training courses the company provides, which are tailored to different job responsibilities and skill levels in the workforce.

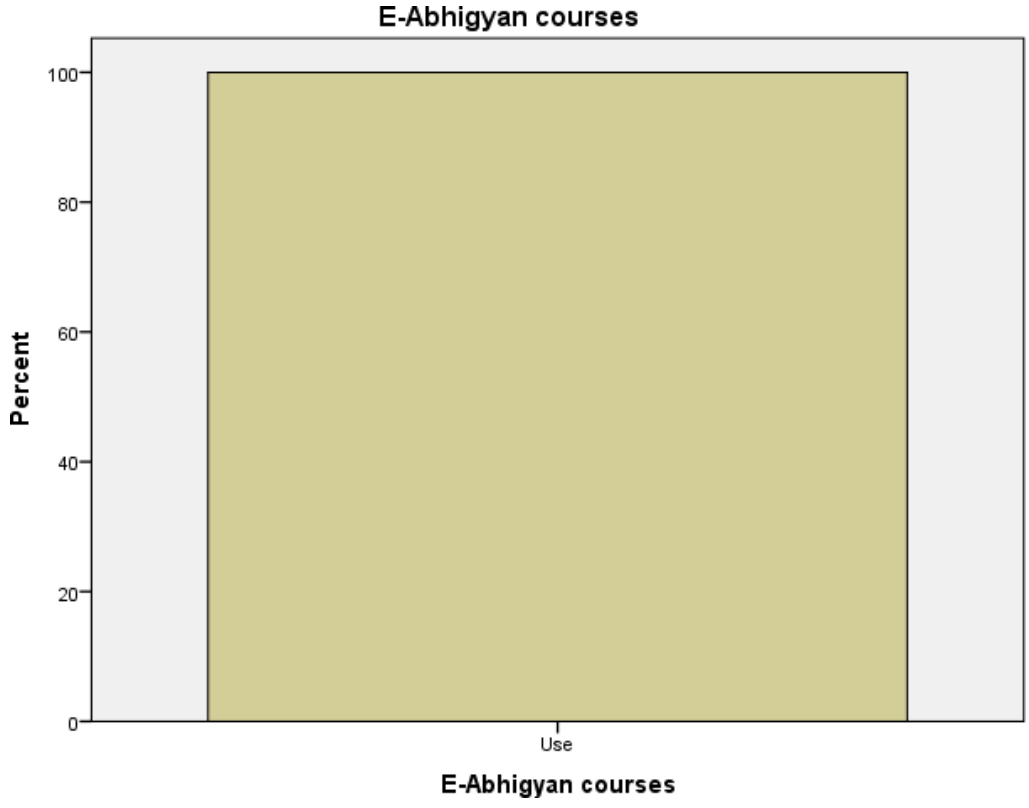
4.4 E- LEARNING PLATFORMS

Table 9 No. Of employees refer to E-Abhigyan courses

E-Abhigyan courses

	Percent
Use	100.0

Figure 9 Bar chart showing percentage of employees refer to e-Abhigyan course



Based on the analysis, all study participants—all 100 percent of them—have utilized the E-Abhigyan platform. This result implies that a high degree of E-Abhigyan platform acceptance and utilization is present among the organization's staff members. The platform appears to have gained a lot of traction and involvement from the workforce, which suggests that it works well as a learning and development resource.

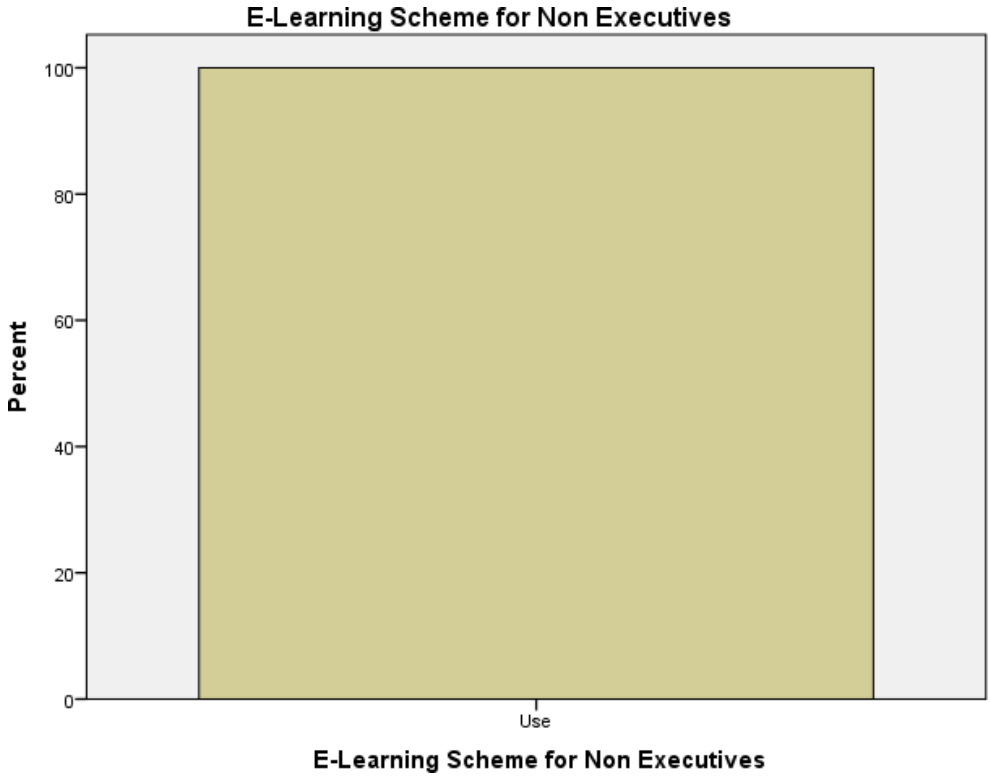
Table 9 No. Of employees refer to e-learning for non-executive courses- BSP E-Pathshala

BSP e-Pathshala: E-Learning Programme for Non-Executives

	Percent
Use	100.0

Figure 9 Bar chart showing percentage of employees refer to

Non-executive courses BSP E-Pathshala



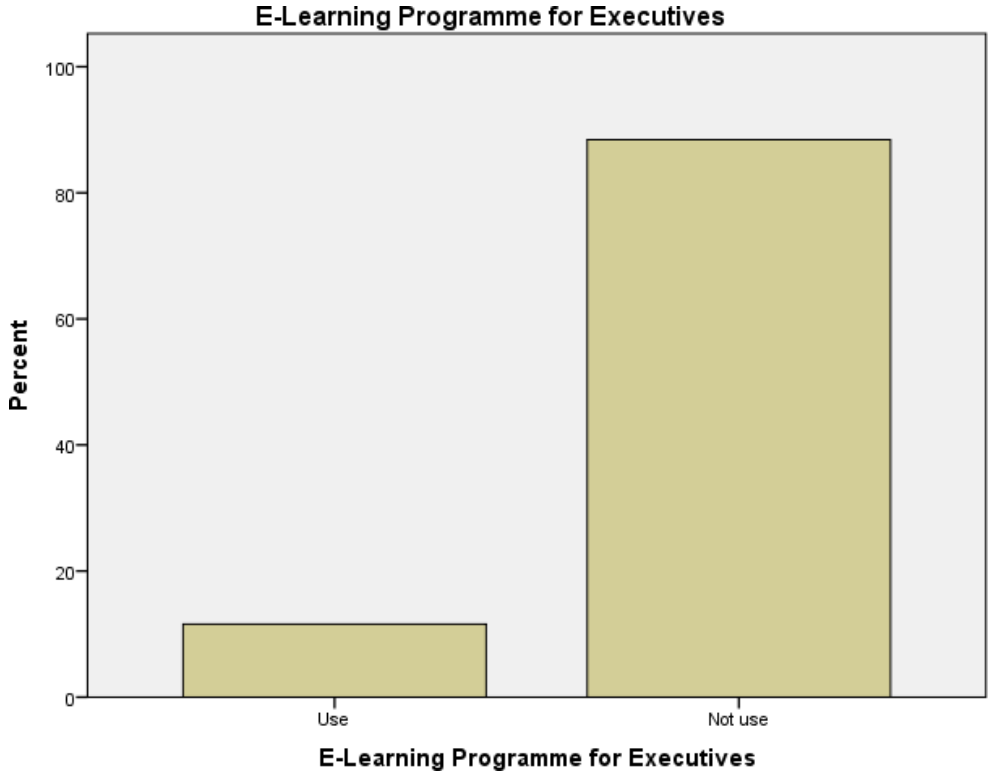
The BSP e-Pathshala: E-learning Programme for Non-Executives has been utilized by all study participants, according to the analysis. This result shows that all the employees who were polled fully adopted and used the BSP e-Pathshala platform. It indicates that the organization's non-executive staff members are highly engaged with and accepting of the e-learning program.

Table 10 No. Of employees refer to e-learning for executive courses Sail Pathshala

SAIL Pathshala: E-Learning Scheme for Executives

	Percent
Use	11.6
Not use	88.4
Total	100.0

Figure 10 Bar chart showing percentage of employees refer to Non-executive courses sail Pathshala



The results of the analysis show that, out of the study's employees, 11.6% have used the SAIL Pathshala: E-Learning Scheme for Executives, whereas 88.4% have not. The results indicate that this program is only for executives

4.4 The impact of training programs, on job performance-regression analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.324[a]	.105	.065	.17055

a. Predictors: (Constant), Training Evaluation Training Need Analysis Training Design, Training Delivery

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.307	4	.077	2.640	.039[b]
	Residual	2.618	90	.029		
	Total	2.925	94			

a. Dependent Variable: job performance

b. Predictors: (Constant), Training Evaluation Training Need Analysis Training Design, Training Delivery

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.139	.421		7.460	.000
	Training Need Analysis	.113	.077	.151	1.460	.148
	Training Design	.056	.106	.069	.524	.602
	Training Delivery	-.074	.070	-.141	-1.057	.293
	Training Evaluation	.169	.084	.304	2.021	.046

a. Dependent Variable: Job Performance

Training programs had a substantial influence on work performance, according to the regression analysis (F (4, 90) = 2.640, p =.039). A statistically substantial amount of the variance in work performance is explained by the model (R =.324, R Square =.105, Adjusted R Square =.065). With p-values of.046 and.148, respectively, Training Evaluation and Training Need Analysis did not show any discernible influence on work performance. On the other hand, Training Delivery shown a positive impact (β =.304, p =.293) and Training Design demonstrated a negative effect (β = -.141, p =.602). Since the total regression model was significant, the premise that training programs have a significant influence on work performance is acceptable despite the inconsistent results.

4.5 The impact of e learning on job performance and learning-regression analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.431[a]	.186	.159	.16178

a. Predictors: (Constant), use, system quality, Information quality

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.543	3	.181	6.918	.000[b]
	Residual	2.382	91	.026		
	Total	2.925	94			

a. Dependent Variable: job performance

b. Predictors: (Constant), use, system quality, Information quality

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.135	.660		3.235	.002
	Information quality	.124	.086	.171	1.445	.152
	system quality	.305	.117	.306	2.609	.011
	use	.013	.196	.006	.065	.948

a. Dependent Variable: job performance

Effective e-learning strategies appear to have a substantial influence on work performance, according to the regression analysis (F (3, 90) = 6.918, p =.000). A significant amount of the variance in job performance is explained by the model (R =.431, R Square =.186, Adjusted R Square =.159). Use did not have a significant influence (β =.006, p =.948), while Information Quality (β =.306, p =.011) and System Quality (β =.171, p =.002) did show significant positive effects on work performance among the predictors. As a result, it may be concluded that both H2 and H3 are accepted, showing that efficient e-learning strategies have a major influence on worker learning outcomes and job performance.

4.6 Findings and discussion

1. The Bhilai Steel Plant (BSP) training programs' influence on employee performance was significantly highlighted by the examination of such programs. The total regression analysis showed that training programs had a substantial impact on work performance ($F (4, 90) = 2.640$, $p = .039$), despite minor discrepancies in individual training components. While Training Design had a negative effect ($\beta = -.141$, $p = .602$), Training Delivery had a favorable impact ($\beta = .304$, $p = .293$) on job performance, while Training Evaluation and Training Need Analysis did not reveal any significant impacts.

This shows that while the way in which training is provided can have a good impact on work performance, the training programs themselves may need to be improved to achieve maximum efficacy. Nonetheless, the hypothesis (H1) that training programs do, in fact, have a considerable influence on work performance is supported by the importance of the whole model.

2. Strong evidence of the effects of successful e-learning strategies on employees' learning outcomes and job performance was found via examination of these strategies. Regression analysis showed though Use did not have a significant influence but overall techniques had a substantial impact on job performance ($F (3, 90) = 6.918$, $p = .000$), with significant positive impacts seen for Information Quality ($\beta = .306$, $p = .011$) and System Quality ($\beta = .171$, $p = .002$).

   These results are consistent with hypotheses H2 and H3, suggesting that worker learning outcomes and job performance are significantly impacted by efficient e-learning methodologies. The success of the organization's e-learning activities is further supported by the high degree of participation with platforms such as BSP e-Pathshala and E-Abhigyan.

3. Further evidence of the organization's appreciation for the benefits of technologically enabled learning solutions is the broad use of e-learning platforms such as BSP e-Pathshala and E-Abhigyan. These platforms appear to be useful for providing top-notch training materials, as seen by the noteworthy improvements in learning outcomes and job performance that come with e-learning. Nonetheless, the investigation also identified opportunities for enhancement, namely in the planning of instructional initiatives and the caliber of data supplied via virtual learning environments. By taking care of these issues, training programs may prove to be even more successful, improving work output and staff development in the process. For human resource management practitioners working for the BSP and other comparable companies, the study's conclusions offer insightful information. Organizations may enhance their workforce by funding thoughtful training initiatives and utilizing efficient e-learning strategies.

4. When it comes to pinpointing training requirements that are in line with corporate objectives and the leadership vision, Training Needs Analysis (TNA) is essential. Knowledge-oriented leadership has a good influence on knowledge management and innovation performance, as established by Al-Sous et al. (2023), highlighting the significance of matching training goals with organizational objectives. Comparably, research by Rizwan Naqvi & Sareen (2022) highlighted the value of applying structured training frameworks like the Kirkpatrick and ADDIE models, which improved quality and reduced costs at companies like Jindal Stainless Steel. Additionally, the usefulness of on-the-job training in improving employee performance in industrial environments

was underlined by Nawarathna et al. (2021), highlighting the significance of tailored training design.

5. Palo & Padhi (2023) found that continuous Total Quality Management (TQM) training greatly enhanced staff competencies and teamwork in terms of training delivery style, highlighting the need of interactive and consistent training approaches. In reference to training evaluation, Urbancová et al. (2021) determined the variables affecting the assessment of training efficacy and proposed that combining various evaluation techniques can yield a thorough comprehension of training results. With the shift to e-learning, scholars such as Zahari et al. (2020) have highlighted the significance of knowledge management in e-learning initiatives, emphasizing the requirement for high-quality information to enable successful learning outcomes.
6. Furthermore, Alsabawy et al. (2012) emphasized how important system quality is to the success of e-learning projects, particularly usability and functionality. Last but not least, Giannakos et al. (2021) investigated the potential of e-learning to promote organizational learning, showing that promoting the use of e-learning tools can close skill gaps and boost productivity. All things considered, these results highlight how crucial strategic training and e-learning programs are to improving job performance and organizational outcomes.

4.7 Conclusion

Finally, the study carried out at the Bhilai Steel Plant (BSP) on e-learning and training programs has provided important new information about how these efforts affect organizational results and worker performance. The first point made by the study was how crucial training is to helping workers acquire the technology, information, abilities, and attitudes that they need to succeed in their functions. It outlined how staff training may help businesses in terms of greater strategic development, more productivity, and higher-quality goods and services.

The study found two key gaps:. the need to link training to job performance and to evaluate the impact of e-learning at BSP. The research goals were set with the purpose of filling in these gaps. Specifically, they examined the effects of training programs on work performance as well as the efficiency of e-learning strategies on employee learning outcomes and job performance. Three hypotheses were so developed.

A thorough review of the data showed that participants at BSP were distributed over a wide range of job titles, demonstrating the labor force's complete representation. High participation rates were found in several training efforts, such as computer training, workshops, in-plant training, management training, internal training, and vocational training, according to the study of training programs. Like this, all participants used e-learning resources as BSP e-Pathshala and E-Abhigyan, demonstrating their universal acceptability and use.

Despite differences in the specific training components, regression analysis showed that training programs had a substantial impact on work performance. Effective e-learning

techniques also significantly improved work performance, with notable gains shown in system and information quality. These results corroborate the hypothesis and highlight the value of e-learning strategies and training programs in enhancing work performance and learning objectives at BSP.

To develop worker capacities and promote a culture of continuous learning and progress, human resource management practitioners may benefit greatly from the study's results, which point to the necessity of funding strategic training efforts and effective e-learning tactics. Organizations such as BSP can promote staff development and work production by addressing chances for improvement in training program planning and data quality.

In conclusion, the study emphasizes how important strategic training and e-learning initiatives are to fostering organizational competitiveness and success, as well as how important they are to enhancing employee performance and organizational results.

4.6 Managerial Implication

1. Feedback on Training Received from Employee Bosses:

Establishing a systematic system for supervisors to submit feedback on the training they have received can yield important information about how effective training initiatives are. This feedback loop can be used to determine areas that need development, assess how relevant training material is to job requirements, and make sure that training programs are in line with company objectives. Furthermore, positive comments from managers can help employees build a culture of professional growth and continual improvement, which will ultimately improve work output and organizational success.

2 Continuous Improvement of E-Learning:

The study emphasizes how crucial it is to keep improving and refining e-learning platforms to guarantee their efficacy in promoting employee skill development and learning. Enhancing the usability, relevance, and engagement of e-learning resources can be achieved by exploiting technology improvements, integrating user feedback, and regularly updating e-learning content. To further improve employee adoption and use of the newest e-learning tools and techniques, training programs can be invested in. This will increase the organization's overall e-learning initiatives' efficacy, efficiency, and satisfaction.

Training Linked to Performance:

A more data-driven approach to talent development and performance management can be facilitated by establishing explicit ties between training attendance and subsequent work performance measures. Organizations may effectively monitor the return on investment in training and development activities, prioritize training projects that result in observable performance gains, and make well-informed decisions about resource allocation by quantifying the impact of training on employee performance.

CHAPTER 5.1 TASK HANDLED, LEARNING AND CHALLENGES

5.1 Task handled and learning

Throughout the four-month internship at Bhilai Steel Plant (BSP) from January to May 2024 till now in two and a half months i.e. From January to March following is the summary of the tasks completed along with the associated insights:

1. **HR Administrative Work**: I am tasked with a variety of administrative duties, which allows me to have practical hr administrative work and organization experience. Like keeping track of attendance records and leave records and. I also helped in organizing the training program.

2. **Bhilai Steel Plant HR Modernization Project Questionnaire**

   I helped my mentor create a thorough questionnaire to evaluate SAIL's present HR skills and practices during my internship at Bhilai Steel Plant. Understanding the shift from "Personnel" to "HR" roles, imagining contemporary HR procedures, and formulating a two-year implementation plan were all part of this.
   I got the idea about the process of creating a strong business case for HR modernization projects, the significance of matching HR practices with corporate goals, and strategic HR planning.

3 . **Organizing Republic Day and the SAIL Foundation Day Program**: I oversaw planning festivities like Republic Day and the SAIL Foundation Day program

3. Understanding Promotion Policy, Grievance Management, and Disciplinary Action

I developed a thorough awareness of the organization's grievance and disciplinary action procedures. I also became acquainted with the promotion policy, understanding the standards and processes for staff development.

5.2 Challenges

5 2.1 Managing intricate organizational structures: Had trouble comprehending the various departments and levels of BSP, but resolved by encouraging proactive involvement with supportive employees, patience, and communication

5 2.2 Admin Work: Managing a high volume of administrative tasks within a limited timeframe. Ensuring accuracy and attention to detail in tasks such as data entry and documentation was a challenge

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APPENDIX 1: QUESTIONARE

QUESTIONNAIRE

Q1. Job Title

Q2 Which of the following training programs have you participated in at Bhilai Steel Plant? (Please select all that apply

Particulars	**Yes**	**No**
In-plant training		
Computer training		
Workshop training		
Fresh entrant's training		
Management training institute		
If any other specify		

Q3 Rate the following factors in 1 to 5 scaling for the training and development effectiveness (1=not effective, 5=highly effective)

Particular	**1**	**2**	**3**	**4**	**5**
Training Needs Analysis					
Objective					
Task (job) analysis					
Person analysis					
Training Design					
Objective training					
Training content					
Training method					
Selection of trainer					
Training Delivery style					
Learning principle					
Learning style					
Training material					
Training Evaluation					
Reaction					
Job Behavior					
Learning					
Ultimate Value					

Q4 Which e-learning initiatives or courses provided by Bhilai Steel Plant have you participated in? (Please select all that apply)

	Yes	**No**
1. E-Abhigyan courses -		
2. SAIL Pathshala: E-Learning Scheme for Executives -		
3. BSP e-Pathshala: E-Learning Programme for Non-Executives -		

Q5 Rate the following factors in 1 to 5 for the E- learning effectiveness (1= Strongly Disagree, 5= Strongly Agree)

Particular	**1**	**2**	**3**	**4**	**5**
Information quality					
The e-learning system provides sufficient and complete information.					
The e-learning system provides clear and definite information.					
The information provided by the e-learning system helps to solve my problems.					
The content of the e-learning system is good.					
System quality					
The e-learning system provides interfaces of easy operation.					
The buttons for operation of the e-learning system are clearly and easily understood.					
The e-learning system responses instantly.					
The functions of the e-learning system work well and are seldom out of use.					

Use					
I frequently use the e-learning system					
I use lots of functions of the e-learning system.					
I depend on the e-learning system.					

Q6 Rate the below items for Employee Performance after training and e-learning initiatives in 1 to 5 (1= Strongly Disagree, 5= Strongly Agree)

Employee Performance	**1**	**2**	**3**	**4**	**5**
I accomplish tasks according to standard procedure					
My work efficiency is better than my colleagues					
I know how to plan and schedule the progress rate of the task I am responsible for.					
My average work efficiency is enhanced.					

APPENDIX 2: PICTURES WHILE IN THE INDUSTRY

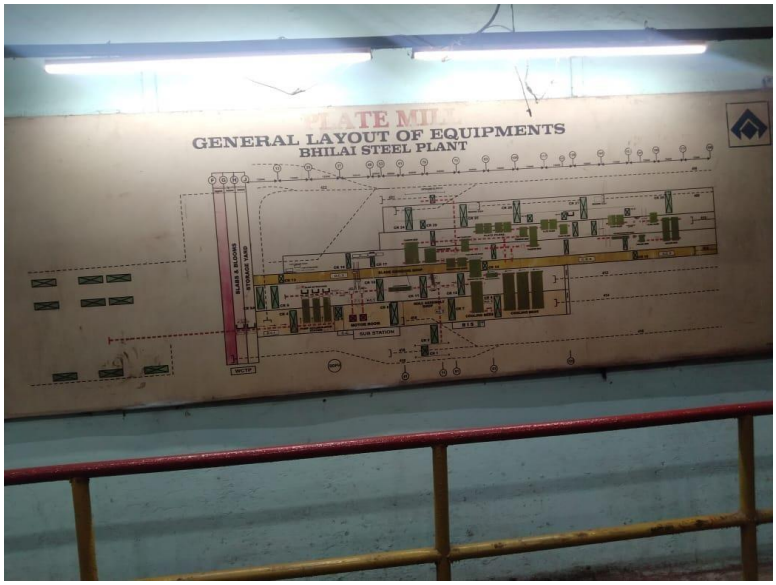

Figure 1 PLATE MILL

Figure 2 CASTING SHOP

Figure 3 STEEL MELTING SHOP

Figure Library

Figure 7 Electric repairing shop Entrance

Figure 8 Giving a presentation about the company

Figure 19 ACWE STORE Entrance

Figure 21 With managers Steel Zone 1