

EXPLORATORY STUDY OF IMPACT OF LEARNING AND DEVELOPMENT ON  
EMPLOYEE BEHAVIOUR AND RETENTION IN SMALL AND MEDIUM IT  
ENTERPRISES IN INDIA

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EXPLORATORY STUDY OF POTENTIAL OF LEARNING AND DEVELOPMENT  
IN BRINGING EMPLOYEE BEHAVIOUR CHANGE AND ENHANCING  
RETENTION IN SMALL AND MEDIUM IT ENTERPRISES IN INDIA

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## ABSTRACT

### EXPLORATORY STUDY OF POTENTIAL OF LEARNING AND DEVELOPMENT IN BRINGING EMPLOYEE BEHAVIOUR CHANGE AND ENHANCING RETENTION IN SMALL AND MEDIUM IT ENTERPRISES IN INDIA

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[Abstract text must not exceed 350 words. Provide a complete, succinct snapshot of the research, addressing the purpose, methods, results, and conclusions of the research.]

Attrition is a major issue that affects the performance of IT companies negatively. Past literature has revealed strong associations between L&D & employee attrition. Thus, it is used as one of the retention methodologies by many large IT enterprises across the globe. However, this practice is nearly non-existent in SMEs. This study proposes the adoption of L&D in Indian IT SMEs by demonstrating the impact of learning and development (L&D) on employee behaviour in Indian IT SMEs. It uses triangulation for an investigation that includes interviews, learning intervention impact analysis, and focus group discussions as primary methods. The research shows how



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## CHAPTER I: INTRODUCTION

### 1.1 INTRODUCTION

The development of skills in employees is an important part of Human Resource Management (HRM) as it helps the organization improve employees' performance which influences the financial outcomes of an organization (Arulsamy, et al., 2023) thereby creating a competitive advantage (Raji, 2016). This objective is achieved in numerous ways including learning and development (L&D) that involves the delivery of learning interventions that are designed to enhance the knowledge, upgrade skills, and transform behavior of employees (Suhasini & Suganthalakshmi, 2015). Job performance is an aggregation of behavior that adds value to an organization (Chernyshenko & Stark, 2015). Learning can lead to acquisition of behavior in employees that create improved performance on a job (AIHR, 2025). Thus, L&D can be seen as a mechanism that can optimize one's performance (Arulsamy, et al., 2023). A positive association has been observed between learning and development and employee performance by several researchers. Dr. H. C. Bindusha et.al (2022), Dewi Rama Niati et.al, and Mohamed Hamed et.al (2022) investigated this positive impact suggesting L&D as a strategic move for an organization (Muniraj, 2024).

L&D has also been observed to impact employee retention which is an obligation an employee would feel to continue working for an organization (Das & Baruah, 2013).

Retention being a key factor that contributes to the success of an organization, retention strategies have become an important part of the efforts taken by organizations. When seen as a behavioral construct, employee retention can be accounted as the decision of an individual to stay with the current employer. While there are several causes of employee attrition, lack of development is also seen influence this employee decision to stay in an organization (Bharadwaj, 2023).

However, to understand if L&D interventions cause an impact on the performance behavior or decision behavior reflected through retention, an observation of employee behavior before and after a learning intervention is required. Several evaluation methods can be used to understand the effectiveness of programs in enhancing performance or bringing a change in behavior. This research intends to understand this impact through exploration of learning interventions using an evaluation model proposed by Kirkpatrick. Kirkpatrick proposes four levels of evaluation including reaction, learning, behaviour and impact (Kirkpatrick & Kirkpatrick, 2016). However, before exploring the relationship between L&D and employee behaviour through evaluation, it is imperative to understand L&D as a concept.

Learning and Development (L&D) as a concept has undergone major changes over the years, evolving from training events to becoming a comprehensive methodology that promotes continuous learning and employee growth. Previously, organizations primarily used training to improve job performance with instructor-led programs. Later, a

holistic approach was taken that resulted in the emergence of the term ‘Training and Development’ (T&D). With this, the emphasis was not just on job performance but over-all employee development and growth. Today, organizations use the term ‘Learning and Development’ (L&D), which is a more strategic term that integrates not just formal but also informal, self-directed learning, as well as continuous performance improvement. This evolution led to the idea of creating a learning culture in an organization that encourages acquisition of new skills and competencies in employees that supports long-term success of both employees and organizations (Garavan, et al., 2020).

In the early days, L&D initiative were seen as a cost by organizations but with the adoption of the perspective of seeing employees as human capital, it is viewed more as an investment that benefits an organization (Chaudhuri, et al., 2022). L&D has been observed to not just impart knowledge and develop skills but also influence the behavior of employees (Suhasini & Suganthalakshmi, 2015). Learning influences employee behavior through performance enhancement which in turn improves organizational performance. It is also seen as a method for maintaining motivation in human resources which can have a positive influence on employee retention (Chauhan & Jawade, 2022).

Employee performance can be seen from different perspectives such as the output of work, its effectiveness, quality of work, and behavior (Mishra, 2020). A change in employee behavior resulting from L&D create enhanced performance that benefits organizations. Thus, L&D is a regular practice used in many large IT enterprises as a part of HRM. L&D interventions are designed by these organizations to impact knowledge

and enhance skills to achieve better performance in employees. L&D has been seen to affect the innovative work behavior of employees (Afrinanda, et al., 2022) and increase their morale, satisfaction, and proficiency (Chakraborty, 2023). It is also considered a tool to enhance employee motivation which drives a person towards achieving organizational goals (Gondane, 2022). L&D interventions are designed to not just impact skill and knowledge but support overall development and growth of an employee.

Early theorists have explored the concept of behavior modification through conditioning as a form of training. The classical and operational conditioning theories illustrated the formation of behavior through training while behaviorists like Skinner and Pavlov suggested that rewarding trainer behavior can increase its display (Kurgat, et al., 2015). Modern research further explored the positive association between L&D and employee behavior. A study conducted on 340 employees of SJVN Ltd revealed that learning and development programs can help predict a change in behavior resulting from a change in their self-perception and perception of L&D (Kaundal & Chandan, 2016). Employees participating in L&D programs were observed to develop more positive self-perception that influenced behavior. Another study observed that L&D sessions help build employee capacities in turn giving them a boost in self-esteem that in turn contributes to improvement in their performance (Ndirangu, 2021). In this research, a positive association was discovered between self-esteem and performance behavior. L&D enhances self-esteem that in turn brings about a change in performance behavior. Performance behavior is seen by IT organizations from different perspectives like work

output, quality, and effectiveness. Research by Harvard Business Review suggests integration of learning into workflow through L&D to improve performance. This is through development of skills and capabilities through L&D to support performance as well as providing reinforcement to support integration of new skills at work to enhance performance (Rudy, 2022). Reinforcement can ensure that learners are not just able to acquire new knowledge and skills but also able to apply to perform (McKinsey & Company, 2022).

While research has stressed the importance of L&D in creating behavior change through performance enhancement and influencing employee's decision to stay in an organization, what kind of interventions or practices create this kind of impact have not been explored. Some organizations use L&D as a strategic measure to retain employees and initiate behavior change. However, the influence can only be confirmed through observation of practices deployed and the evaluation of impact reflected as a behavior change. The Kirkpatrick model of training evaluation suggests four levels of evaluation including knowledge acquisition, learning, behavior, and results. Most evaluation efforts are focused on the first two levels and only a few covered the behavioral aspects. However, as per Kirkpatrick, without studying the behavioral outcome, an organization cannot make out if the learning has brought any desired change in behavior required for employee development (Kirkpatrick & Kirkpatrick, 2016). To understand if an L&D intervention has been successful in creating a behavior change, behavior needs to be measured for which Behaviorally Anchored Rating Scale (BARS) can be used. Several

performance dimensions have been explored by researchers when using BARS to study performance effectiveness such as communication skills, teamwork, problem solving, initiative taking, adaptability, dependability, and technical skills. While there could be standard tests used for evaluating soft skills like communication and team work, evaluation of technical skills for performance requires an objective method of observation and comparison for which the scale offers behavioral indicators that were used in this study to find areas for improvement in employees (Klieger, et al., 2018).

Despite the promises of L&D offered by the findings from research, the L&D model has mostly been implemented in large organizations considering the factors like cost, resource requirements, efforts, and time-consuming processes (McKinsey & Company, 2022). In this research, the researcher wants to explore the potential of L&D in bringing behavior change through performance enhancement and creating influence on employees decision to stay in small and medium IT enterprises (SMEs) in India. For this, considering the reluctance of SMEs because of capital and efforts required with L&D, the researcher has proposed an adapted model of L&D implemented that will have non-essential and good-to-have elements excluded and only propose elements essential for its success according to the needs of SMEs. To build this new model for adoption in an SME, the researcher has used participatory action research (PAR) taking insights from L&D professionals, IT Leaders, and IT employees to identify the essential elements that can lead to success of L&D in an SME with minimal investment. The adapted model is proposed as an outcome of this study for IT SMEs in India. To ensure the effectiveness of

this model, the researcher has included two case studies from IT companies where L&D interventions were implemented, and the impact was observed. This study aims to not just identify the practices that could lead to the success of L&D in an SME but also provide a method of implementation through formation of a conceptual model



This research makes use of PAR as the primary methodology to gather the voice of learning and development professionals, IT professionals, and employees working in IT organizations to understand how L&D interventions impact employee behaviour in SMEs in India. It uses a mixed methodology of data collection with triangulation involving qualitative data collection through interviews, focus group discussions and multiple case studies using both qualitative and quantitative approaches.

This research focuses on the behavioral impacts of learning and development on employees. However, the research is focus on finding the possibility of the implementation of L&D practice in SMEs in India. Considering that the model is mostly active in large organizations, it would not be possible to study its impact in SMEs unless it is implemented and tested. To overcome this difficulty, the researcher decided to take the help of PAR methodology as it allows not just immersion of the researcher in the working environment for in-depth research but it also allows study of a new practice through actual implementation of the same in an environment. Moreover, it also allows collection of data from different communities of participants including L&D professionals, IT leaders, and employees from both small and large enterprises to inform the model of implementation for the current research.

## **1.2 RESEARCH PROBLEM**

Human behaviour is a complex phenomenon to understand as it is affected by a large number of factors. However, employee behaviour plays a crucial role in shaping an organization and bringing it success and thus, is an important area of study in organizational context. Among various initiatives that organizations take to positively influence employee behaviour is also learning and development (Singh & Ahuja, 2018).

However, does learning and development initiatives actually impact the human behaviour at workplace is a question that has been explored by several researchers. A positive correlation has been found between learning and development and several behavioral impacts factors like performance and intention to stay. However, what L&D practices can influence specific behaviour in the context of performance improvement is yet to be deeply explored. If the impact of a learning intervention can be studied on specific employee behaviour, the impact can be explored at a granular level.

However, the phenomenon is mostly used in large enterprises and SMEs are mostly untouched by L&D interventions. SMEs face incessant pressure to remain competitive because of globalization. Learning and Development (L&D) can serve as a tool to enhance their competitive advantage. The question is if there is a positive impact of L&D on employee behaviour, is it also true for an SME.

Adam Smith suggests L&Ds capability to improve employee skills that in turn create better performance. Previous studies have explored different aspects of employee behavior to understand the impact of L&D on them such as motivation, productivity, and performance. While this confirmed that there exists a positive impact, the level of impact on an SME can only be understood after evaluation. This would require an L&D intervention to be existent for evaluating its outcome and only then can the study throw a light on the potential of L&D. However, the current model of L&D practiced in large organizations might not be economically viable or feasible solution for an SME. Thus, a new model is needed that must be constructed considering the differences in the needs, resources, and situations of SMEs compared to large enterprises.

This research aims to understand if L&D interventions in SMEs are capable of bringing a positive behaviour change in SMEs in India with such adapted model of implementation. However, since L&D is not a widely used practice in SMEs, the implementation of L&D has to be initiated for the study conducted on two IT companies selected for this research.

For creating a model that can truly be adopted in an IT SME, it would require the identification of essential L&D components that can meet SME needs. Also, impact evaluation is required to understand if L&D does create a positive impact on employee performance.

The research is of the view the positive impact of L&D on employee performance and retention behavior that has been observed in large organizations can also be replicated in SMEs with appropriate level of adoption and effective implementation. However, considering the resource constraints of SMEs, the prevailing models of implementation might not be feasible for these organizations. Identification of L&D practices and components that can create a positive impact on behavior can help in the construction of a model that is feasible and adaptable for SMEs. This research thus aims to explore the practices of L&D and study the impact of each so as to identify essential practices for implementation and propose a model informed by this investigation for the adoption and implementation of L&D in SMEs of India.

### **1.3 SIGNIFICANCE OF THE STUDY**

The employee behaviour is a major determiner of not just the employee performance but also the performance of an organization. Employee behaviour can create a competitive advantage for an organization and help it thrive in a competitive environment (Agboola, 2019). In the current era of rapid advancements in technology,

change in organizations has become common. However, to adapt to the changes, the organizations need to change themselves which is only possible with a change in the employees behaviour and attitude. Organizations need to create an environment in which employees can change their behaviour as needed for success of an organization.

Employees newly appointed from the academia also need support in adapting to the behavioral expectations if they have to become a part of an organization. Thus, employee behaviour change initiatives are commonly implemented by L&D departments of large organizations.

However, behaviour change is a complicated concept and a construct which is difficult to measure. The measurement consumes significant resources and time while requiring a well-defined and structured approach to measurement. Kirkpatrick's model of training evaluation provides a framework for such a measurement but it is difficult to adapt for an SME considering the resource requirements (Jobring & Kober, 2013). If we can find the possibility of implementation of L&D and measurement of its impact for an SME, without incurring much cost and involvement of resources, a ground of adoption can be opened for Indian SMEs so that they can also be benefited from L&D initiatives that have been observed to bring several benefits to large organizations such as enhanced performance, and so on.

This study provides insights into the practices used for learning and development as well as the impact they create on employee performance behaviour. With the focus on creating a positive impact, the research has identified essential and impactful practices of L&D that would be feasible for the implementation in SME organizations. With this investigation, the research proposes a model of implementation of L&D in SMEs for

effective impact of L&D in the form of positive behaviour change in employees. With the use of the proposed model, Indian IT SMEs would be able to adopt and implement L&D processes in their organizations and achieve positive results from it.

#### **1.4 RESEARCH PURPOSE AND QUESTIONS**

The objective of this research is to provide SMEs with an opportunity to implement L&D and as a result, improve employee behavior to support higher performance. The goal is to develop an understanding of how L&D interventions can impact employee behavior in an organization through a participative inquiry.

The purpose of this research is to understand how learning and development initiatives impact employee behaviour in Small and Medium sized IT Enterprises in India. The study seeks to gather insights from experts to create an adapted model of L&D for implementation in SME and then, through its actual implementation and evaluation, understand how it impacts employee behaviour in an organization.

The purpose of this research is to investigate the impact of learning and development on employee behaviour on the dimension of performance and on their decision to stay with an organization. Organizations today are investing significantly on development and growth of employees understanding that the effectiveness of learning intervention could both influence employees decision to stay and enhance work performance. However, although the model of L&D when delivered in large enterprises have already proven effective in improving employee performance, it is not implemented in most SMEs considering the lack of financial and human resources. This research also

aims to identify elements and practices of L&D to propose a feasible model of its implementation in SMEs.

Considering the research need to understand the impact of L&D on employee behavior and discovering a feasible model of implementation, this research will address the following research questions:

1. Does Learning and Development intervention bring a change in employee behavior in an IT SME?
2. What kind of impact does L&D have on employee behavior in an IT SME?
3. What Learning and Development model can be used for implementation in Indian IT SMEs to create a positive influence on employee performance behavior and decision to stay?

Exploring these questions would deliver insights into the role of L&D in influencing employee behaviour with focus on performance enhancement. The findings of the research would contribute to the designing and implementation of an adapted model of L&D for small and medium enterprises.

In the scope of this research, change in employee behaviour as a result of implementation of L&D would be investigated. To understand the impact of L&D on employee behaviour, Behaviorally Anchored Rating Scale (BARS) is used as it allowed researcher to capture performance behaviour of employees before and after a learning intervention for comparison through an active experiment in an IT SME organization. To further investigate the L&D practices and their influence on employee behaviour, the

researcher used a participatory action research (PAR) approach involving introduction of an L&D intervention to observe the practices and their impact as well as use of other qualitative research methods like interviews and focus group discussion to take views of L&D and Professionals on practice and impact of L&D on employees and the organization.

Through a thorough analysis of L&D implementation and impact, this research brings out practical recommendation for L&D implementation in SMEs with an aim to create a positive impact of L&D on an organization and bring a change in performance behaviour of employees. The findings from this research would add value to the IT industry Talent Development professionals and organizations by providing a model for the implementation of the practice so as to create a positive impact on employee behavior.

## CHAPTER II: REVIEW OF LITERATURE

### **2.1 THEORETICAL FRAMEWORK**

This section of the research aims to identify a theoretical framework to support the current research and discusses previous research findings from the studies conducted on the behavioral impact of learning and development in corporate to extract insights and identify gaps that current research can fill. Theories and research relevant to the topic would be discussed here. The findings from the research are expected to support the idea that learning and development can be a tool to support employee performance through behavior modification. However, the model is implemented in large enterprises but has not been observed in small, and medium enterprises. This literature aims to find a scope for the implementation of L&D in SMEs and evaluate its impact on employee behavior.

Considering the nature of this research, the literature explored in this section is divided into sections including Learning and Development, Learning Impact, Employee Performance Behavior in IT organizations, Employee Retention, and Impact Evaluation . It would explore learning science theories, impact assessments, behavioral theories, L&D models, and performance behavior.

The term learning and development was earlier called ‘Training and development’. Although these terms are often interchangeability used and can be easily



confused between, Kitson (2003) noticed a striking difference suggesting that learning was found to be more linked with formal education in a school or college and thus was much debated before it entered the corporate jargon. Training has been defined in multiple ways including a planned endeavor to modify behavior, attitude or knowledge as per Manpower Services Commission, U.K. (1981) and as a method to impart these that involves instructors as per Sloman (2005). The term learning also adds focus on the learners themselves and thus, is a more widely used term now.

The term behavior can be seen as any observable mental, emotional, and physical conduct of an individual resulting interaction between one's internal thoughts or feelings and external stimulus that acts as the trigger. From theoretical perspectives, stimulus or the antecedent, resulting response, reinforcements supporting or inhibiting the response, and the consequences can be identified as major components of a behavior. A number of factors are observed to create influence on these behavioral components that could be environmental, biological, and cognitive thereby shaping behavior in different ways. Considering the intricate connections between different components of behavior, any change desired in an individual's behavior is not easy to bring about and requires sustained efforts for any change or development of a new desired behavior.

Traditional models of training were not sustainable to bring about a behavior change in employees as training is delivered as a one-time event. Learning and development model on the other side fills this gap as it offers a model of reinforcement and sustained efforts into employee development thereby paving a way to allow behavior modification. To understand if the impact is real, the observable performance behavior needs to be measured using a scale and thus, the literature also covers the discussions on the aspects and methods of impact measurement used in literature.

## **2.2 SIGNIFICANCE TO THE IT INDUSTRY**

It is imperative for IT organizations to be competitive and drive innovation considering the pace of technological advances. For this to be possible, it needs to keep its resources who are the key assets for developing strength ready to adapt to the corporate knowledge and be ready for the future needs of the organization to support its growth (Walter & Matar, 2024).

Learning and development interventions can support change in employee behavior which is needed for a number of different reasons such as enhancement of employee productivity, creation of a positive work environment, improvement in team dynamics, long-term stay with the organization, adaptation to changing business needs in employees, and so on. These positive outcomes of behavior change culminate into improved performance both for the employees and the organizations they work with. Moreover, positive behavior of employees can also help IT companies deal with a major challenge of employee attrition faced by employees in India.

Multiple studies have investigated how employee behavior impacts organizational performance and competitiveness. A found from his study on 51 employees of from hospitality that employee behaviour can significantly influence organizational competitiveness explaining 68.4% of its variation (Simbine & Tukamushaba, 2010). In a study conducted on 122 large manufacturing firms of Kenya, a significant variation in the

competitiveness of the organizations was found to be resulting from variations in employee behaviour (Maingi, et al., 2019).

Change in employee behaviour can ensure that any learnt skill is not just temporarily used but adopted for a long term and embedded into work habits of employees. The consistent application of skill this way can enhance efficiency, productivity, and quality of performance thereby contributing to the overall success of an organization through sustained high performance (Association for Talent Development (ATD), 2016). To sustain high performance in an IT company can be challenging considering the constantly evolving technology landscape and employees are required to be constantly evolving with skills and capabilities to use new tools and technologies. Thus, for an IT organization sustained behaviour change is of prime importance which can be achieved through the implementation of L&D (KPMG International Limited, 2024).

## **2.3 UNDERSTANDING LEARNING AND DEVELOPMENT**

L&D is a major sub-division of Human Resource Management (HRM) which is seen as a change agent for an organization in the Dave Ulrich Model which suggests that HRM coordinates, communicates, and facilitates changes in an organization. As a part of this process, HR professionals are also required to facilitate learning and implement Human Resource Development (HRD) interventions (Jogdnad, 2019). The current research intends to dig deeper into the arena of HRD through the investigation of L&D



‘Training & Development’ and ‘Human Resource Development’. The framework of Training & Development was first introduced in 1996 by CIPD and since then, there have been several terminologies used to describe employee development but between 1999 and 2000, CIPD debated on its naming conventions and arrived at ‘Learning & Development’ as the terminology used in the occupational standards. As a result, organizations that were running ‘Training & Development’ activities began to replace the term with L&D. The choice of the word learning can be explained by the consensus that was obtained on its potential to give a combined view of lifelong processes of development, education, and training. From this understanding, the L&D process could be related to the development of competencies for employees with planned instructional activities.

L&D was first adopted in the USA in the 1970s when Nadler (1970) defined it as a series of activities designed to produce behavioral changes. However, the debates were still going around the naming conventions and there was confusion about the meaning and boundaries between terms like employee development, human resource development, training and development, and learning & development. Thus, CIPD presented a revised professional standard that defined L&D as ‘The organizational process of developing people involves the integration of learning and development processes, operations, and relationships. CIPD identified two primary roles of L& D professionals including thinking performers and strategic business partners. Thinking performers were knowledgeable and competent in their field and thus, could provide advice on

development to an organization. Business partners would work towards making a contribution to the performance of an organization (Harrison, 2006).

Digging deeper into the concept of learning that is the core of L&D can help better understand the landscape of L&D. Learning has been viewed through different lenses in different fields of psychology including andragogy, behaviorism, and cognitive psychology. Knowles gives the andragogical view of learning by identifying it as a process of acquiring knowledge. On the other hand, behaviorists try to understand it by studying the impact of environmental events on behavior. Cognitive psychology explores the process of learning by discovering mental processes involved in the acquisition of knowledge. To knowledge acquisition, Kolb adds the perspective of experience by saying that learning from the transformation of experience, a view that is most respected in the field of instructional design. Organizational Behavior sees learning as a change in behavior resulting from an experience. From the definitions acquired so far, a common understanding can be obtained of learning and thus, it can be understood as a process of knowledge acquisition through experience that results into a behavior change. As per Eugene (2009), to this definition, we must also add the purpose of knowledge acquisition which is to grow, develop, and perform in a more satisfactory way.

When it comes to the term L&D, the development aspect identified here expands. From a survey conducted on 285 organizations on L&D practices by Meister (2005), L&D activities needed to be aligned with strategic goals, develop competencies, integrate

with other HR activities, and focus on leadership development. The competence that is developed must help an organization create differentiation in the market. Training, the terminology that dominated this space earlier, was an event that taught norms and controlled the understanding of individuals to bring incremental changes. The term learning is more of a continuous process that liberates the boundaries giving learners the freedom to learn and unlearn to bring about a radical change (Sadler-Smith, 2009).

Learning, that occurs as a result of training provided by organizations, can help employees meet their growth needs, according to the ERG theory. As McClelland theory suggests that every individual has a need for achievement motivation that results from one's desire to experience better performance. As learning can help enhance their performance, employees can experience achievement. As per the equity theory of Adams, the growth and achievement that results from learning can act as rewards.

Costen and Salazar (2011) also suggests that well-trained employees have lower dissatisfaction and higher self-esteem. They applied Social Exchange Theory to explain the association. Other researchers like Hong et al. (2012), Hassan et al. (2013), and Fletcher, Alfes, & Robinson (2016) identified other mediating factors like commitment, career development, and self-efficacy, that result from L&D. Abba (2018) used Herzberg's Motivation Theory to describe the connection suggesting that training creates intrinsic motivation in employees.

## Learning Needs Analysis

Training Needs Assessment involves the collection of information about an organizational need that a training program can meet. This need could be a desire for improvement or correction of a deficiency in performance. Needs analysis can be conducted for several reasons such as connecting performance needs with business needs, identifying people who need to solve deficiency problems, fixing a skill deficiency, finding the best way to perform, or identifying the right slot for training. The information is first gathered on these aspects and then, analyzed to create interpretations to guide the development of a training plan. For each type of need analysis, questions are asked to stakeholders to gather information. Jean (), in his book, Training Needs Assessment: Methods, Tools & Techniques and in her book, provide some examples:

Need Analysis	Questions to Ask
Performance Analysis	Is this issue a skill deficiency? What are the current practices and the cause of deficiency? How can the deficiency be addressed? Is training the appropriate way to fix this deficiency?
Feasibility Analysis	Why should this training be done? Is the benefit of training greater than the cost of the current deficiency?
Needs vs Wants Analysis	Why should this training be done? Is the deficiency tied to a business need?
Goal Analysis	What is the specific behavior improvement behind a vague desire?
Job or Task Analysis	What is the best and correct way to do this task? How can this job and task be broken down into teachable parts? How would skills training improve the situation?
Target Population Analysis	Who is the audience for this training? What is known about them to help design and customize



	this training? Is the deficiency widespread among all or more employees in the company? What other populations might benefit from this training?
Contextual Analysis	When will the training be presented? What are the other requirements to deliver the training successfully?

Despite the importance that earlier training design models attach to TNA, post-COVID, most organizations eliminated it as a design in the training design process considering it as a time-consuming process (Biech, 2022).

## **Training Design**

Training design process has been defined in several ways depending on the training model an organization may be adopting. Common models are system, transitional and instructional models of training. The system model identified training as linear process involving five major steps including needs evaluation, training design, development, execution, and evaluation. Performance measures are usually identified in the first stage itself for evaluation later. This model is straightforward and easy to implement but as it does not provide a scope for feedback and change, it also poses a major risk as a mistake at an earlier stage can result in a failure of the complete program. Transitional model helped overcome this gap by adding an inner loop between steps. The focus is on milestones that have to be achieved at defined lengths of time after which a feedback loop is triggered.

Instructional model of training follows similar steps as the system model but it also loops in the feedback throughout the process. Output of one stage of a process is considered as the input for another stage. Instructional models have been more popularly used by organizations today as they are based on the scientific approach for training development. A popular ISD (Instructional design) model is ADDIE that defines identified five stages of training design and for each stage tasks and expected outputs are identified. These include analysis, design, development, implementation, and evaluation.

The analysis stage involves defining what has to be learned through a program and involves learning needs assessment, problem identification and task analysis. The outcome is presented in the form of a learners profile, problem or needs statement, constraints description, and task analysis. The design process involves writing learning objectives, developing test items, creating instructions, and identifying resources for training. The outcome is measured using objectives, strategies and prototypes of the training program. During the third stage of development, training material is developed that can contain instruction sets, storyboards, reading materials, scripts, and exercises. After development is the implementation of the program when a teacher delivered training. Lastly, evaluation is conducted using tests and activities that are used to evaluate learning outcomes, and their results are presented in the form of reports. Formative evaluation is done at multiple stages in a long-duration program and a summative evaluation is carried out at the end of the training program.

Once learner needs are understood, the objectives of a training program or a learning intervention are defined. According to O. Jeff Harris, an objective can support improvement in the learner's behavior by making trainees performance useful. The objectives are like mission of a training program that further guide selection and designing of training. To transform training objectives into a training program, certain factors play importance such as level of participants, training period, program content, training methodology, training responsibility, principles of training, evaluation system, and budget provisions. At the start, it is essential to understand the level of learners in terms of their capacities so that individual differences in their learning needs can be discovered. The duration of the program is opted based on the feasibility and willingness of learners. The content of a training program is broadly categorized into four areas including information, skills, attitude change, and decision-making or problem-solving skills. Further, some basic principles of training have been advised for achieving effectiveness. The principles suggest that training is most effective when learners are in an environment identical to what would be encountered in a job. It is also suggested that for training to be effective, some people working in an organization have to be held responsible. For a training program to be effective, the responsibility of training has to be taken not just by the trainers or L&D professionals but also by the management, supervisors of learners, personnel department, and trained employees. Moreover, friendly and helpful personal instructions to the learners can also bring up the effectiveness of a

training intervention. Lastly, the choice of training evaluation system can ensure that the efforts are taken in the right direction to bring improvement in employee capacities.

The training methods can be on-the-job (OJT) or off-the-job or classroom-based, a choice of which also affects the training effectiveness. OJT methods like experience, coaching, study, job rotation, task force, committee assignments, assignments, and boards are widely used in organizations. Classroom methods like lectures, conferences, discussions, case studies, role-plays, group training, instructions, games, exercises, brainstorming, transactional analysis, and sensitive training are another area of training that have been utilized by organizations across the globe.

### **Implementation of L&D program**

Once designed, a training program is to be delivered to the learners for which its location, facilities, schedules, and monitoring mechanisms are determined. The training delivery needs to be aligned with the level of learners in terms of their age, qualification, experience, and knowledge. Chales E. Watson suggests four levels of learning that create a behavioral change in a learner. These include knowing-about, understanding, acceptance, and ability-to-apply levels.

The learning has to progress according to these levels and the training methods or components are selected accordingly. For instance, training methods like class studies, games, role plays, simulations, and in-basket exercises can be effective at the first level

of knowing. The next level is achieved only after learners have understood the relationship between the application of a concept and its outcome after which a frame of reference is built and the knowledge can be retained by a learner.

The level of acceptance is reached when a learner's belief, attitude and values are aligned with the learned concept. After that is achieved, a learner can move to the next level at which the person doesn't just knowledge of the trained subject but also confidence and willingness to apply learning. At this point, learners need support and encouragement when they find application of lessons challenging.

## **Evaluation**

The last step in the learning design is development of an evaluation structure for the L&D intervention. A number of training evaluation models and frameworks have been proposed among which is the model of Gail Trapnell who identified five dimensions of evaluation including context, input, process, product and impact. This is a simple model that suggests that learner's attitude towards training is important to understand and elements of it must be evaluated considering it. These elements can be design, performance, method of instruction and resources. The model also suggests evaluation of the implementation of the program besides assessing participant's competency. Lastly, the changes that result from a training intervention such as productivity, efficiency, and profitability also need to be evaluated. However, this model is largely focused on the evaluation of training as an investment of money and on the technical components of

training. It largely lacks the consideration of behavioral impacts. Another model of evaluation that has gained more attention of organizations in the current century is the Kirkpatrick model of evaluation which identified four levels of training evaluation.

Level one of Kirkpatrick's training evaluation deals with the reactions of learners to the training delivered. If they found the training program relevant can be understood through assessments of the trainer and training. A trainer may be evaluated on one's knowledge and ability to resolve learners' queries. Training is primarily evaluated based on its length, instruction effectiveness, and ability to meet learner expectations. Certain level 1 evaluation techniques have been identified as graded tests, interviews, and feedback sheets.

As per Kirkpatrick, at the next level, learning is evaluation and it is based on the assumption that learning is the extent to which the attitude of the learner is modified, knowledge is increased, or skill is gained or improved as a result of training. The focus of this level is on the knowledge or skills acquired by learners. At this level, the assessment tests the knowledge of learners through assessments in the form of tests or quizzes. A scoring procedure is used to assess the level of knowledge or skill gained by learners (Farjad, 2012).

At the third level of behavioral evaluation, a change is expected to happen as a result of the application of acquired skills or the use of gained knowledge. Common assessment tools used at this level are interviews, observations, surveys, monitoring, feedback, and assessments.

The results level is majorly concerned with discovering to what extent is an organization able to achieve business results as an outcome of training intervention or program. These outcomes could be a return on investment, an increase in output, reduction in wastage, reduction in complaints, and so on. Evaluation at the last two levels is not very common as they are capital intensive and time-consuming. However, these levels are considered more significant than the first two levels to evaluate if learning has occurred (Khan & Patil, 2023).

## **2.5 SUCCESSIVE APPROXIMATION MODEL**



Figure 2: ADDIE vs SAM (Jay & Tay, 2025)

While ADDIE model is a popular model for instructional design in the space of learning and development, it follows traditional waterfall approach that makes processes dependent on previous steps resulting into long development cycles. In the field of IT, more Agile approach is required considering the need for fast development. Using this approach Successive Approximation Model (SAM) can be proposed for the implementation of the process in IT SME. Also considering the small size of these firms, SAM1 model that is most appropriate for smaller projects and teams can be appropriate (Allen & Sites, 2012).

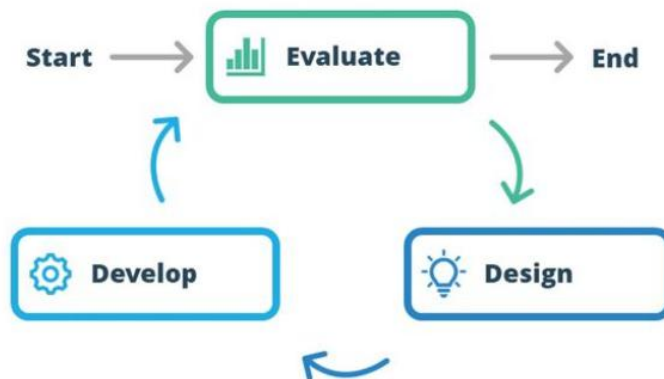


Figure 3: SAM1 Model of Instructional Design (Rimmer, 2016).



SAM approach begins with an analysis or evaluation of the business understanding and learners needs. This would involve discovery related to available delivery formats, skill gaps, company budget, availability of resources, business decision makers, and performance requirements. Based on this information, the next step of training or intervention design is followed which is one iteration that presents a prospective design which is discussed and evaluated to understand its strengths and weaknesses that can be improved in subsequent iterations. Once a design is proposed, the development step follows but this being an Agile model, leaves a feedback loop allowing iterations to be interleaved with the previous step of design. Understanding development challenges might lead to modifications in the design. The step results into creation of a prototype that can further be evaluated and improved in the next iteration. This iterative process allows learning designers to modify or add practices in any stage of design and development if it is found to be more impactful for the learners. The model is faster than the traditional ADDIE approach and more effective as a result of focus on impact (Allen & Sites, 2012).

## **2.6 IMPACT OF LEARNING & DEVELOPMENT**

Organizations rely on employee performance for effective delivery of services. However, advances in L&D practices are not always aligned with these business needs in organizations as suggested by a study conducted on 131 employees by Dickson that despite L&D's potential to create a positive impact on employee performance, lack of relevance of L&D programs for employee tasks and ignorance of training evaluation, the performance of departments could not experience positive impact and the researcher suggested adoption of Kirkpatrick model of evaluation to gain an understanding of effectiveness of training programs (Mdhlalose, 2015).

## 2.7 REINFORCEMENTS

Corporations make significant investment in training and yet these trainings do not deliver impact as learners either forget what they have learnt or are unable to apply what they have learned effectively (Wurth & Wurth, 2018). The classic experiment of Ebbinghaus between 1880 and 1885 suggested that learners forget what the knowledge they have consumed in intervals of 20 mins to 30 days. This poses a challenge for programs targeting behaviour change in employees as retraining information is a precursor to behaviour change. New knowledge begins fading soon after training is over which challenges knowledge retention and thus, behaviour change which requires application of retained knowledge. However, as per Ebbinghaus, it is possible to influence the forgetting curve through repetition. Each repetition can help increase retention using mnemonic techniques and by keeping the material meaningful. Over a period of time, not as many repetitions as done in the beginning are needed. The brain must be challenged at appropriate time and also at the time it is forgetting to improve retention.

Despite the Ebbinghaus theories popularity, the study being a single subject study by the researcher had raised questions leading other researchers to replicate the findings in their own research. Ebbinghaus's basic findings were replicated by Bergman and Rediger for a duration of 75 days that yielded somewhat varied but similar results confirming that without some form of repetition like reinforcement, learning is forgotten over time (Murre & Dros, 2015). A reinforcement focused on results with engagement of learners can ensure training transfer and application of learning (Wurth & Wurth, 2018). Reinforcement is not just increasing retention but is more about application of knowledge. It relies on the assumption that what is more important than how training is done and if learners remember but how they apply the learning received.

The term reinforcement is a circumstance in which an event occurs after the display of a specific behaviour to create an effect of making the same behaviour repeat in the future (Scott & Landrum, 2020). Reinforcements, when positive, can strengthen a behaviour in employees with the introduction of a reward system. With reinforcement, learning is no more just a process of knowledge accumulation but an experience that is influenced by the affective states. Positive reinforcements create an emotional state that encourages a desired behaviour thereby shaping the behaviour (Shackleton-Jones, 2019).

The reinforcement is created using a stimulus that creates a conditioning in the response of a person which in the case of learner would be the desired behaviour. However, it is not the stimulus but the impact it creates which shapes a behaviour and this impact is not linear in nature as could differ from learner to learner based on several factors like context of learning or individual differences between them (Piazza, et al., 2011). The differences in the impact of learning on different learners can be explained by a difference in their thoughts during a learning process. Their thoughts are the outcomes of an interaction between the context and ones previous experiences (Quinn, 2021).

Considering the importance of reinforcement, it is seen as a crucial step in the training cycle. Reinforcement strategies such as spaced repetition of concepts and feedback loops on learner performance are some of the standard methods used by Learning and Development professionals to reinforce learning after training programs (Noe, 2017). However, reinforcement is not merely repetition of concepts for committing it to the memory. Beyond repetition, reinforcement also exposes learner to

different contexts in which learning can be applied to strengthen learning impact (Dirksen, 2021).

Reinforcements are useful in bringing a behaviour change in learners and help in retention of training content reducing the slope of the forgetting curve and enhancing learning.

Reinforcements can be used at fixed or variable intervals in fixed or variable ratio. It can be given after a fixed duration or can just be spontaneous without any predetermined time duration. It can also be fixed based on the number of responses of users or can just be given as a recognition randomly after a few responses in the variable ratio schedules. The use of scheduling in this way can not just ensure that there is an influence on the behaviour but it can also support the formation of a habit consisting of a desired behaviour (Quinn, 2021).

The idea of variable ratio schedule for reinforcement is also leveraged in gamification where game elements are aligned with the objectives of learning and schedules are created to motivate learners while they are engaging with a game (Zeybek & Saygi, 2024). This is a form of operant conditioning in which when the chances of getting a reward are unpredictable, the gamer continues to play and with every win feels the desire to play getting stronger. Game-based characteristics can be used in the process of learning to create a similar impact of reinforcements. System of scores, points, badges, leaderboards, competition, progress bars, bonuses, and immediate feedback are some of the characteristics that are adopted in gamified learning systems. In traditional models of reinforcements, motivation was provided along a fixed schedule that was followed to give learners assessments. In the gamified learning methods, the schedule is not fixed which keeps the learners engagement high while they are interacting with learning

content (Kapp, 2012). Moreover, game-based incentives encourages learners to participate thereby increasing engagement (Zeybek, 2024).

Reinforcement, be it through gamification or other methods, has the capability to make the transfer of knowledge and skills into a sustainable behaviour. As reinforcements are associated with rewards, they can motivate employees not only to learn but also contribute through performance (Rajan & Us, 2017).

However, reinforcement is not easy to achieve without a buy-in from the learners. All learners so not automatically believe in the potential of the program an accept it, so addition of value and encouragement to learners to think of not just what they can learn but also achieve is crucial. Nevertheless, prospects theory states that people give more importance to what could they be losing than what they can gain when making a decision. Learners engage in risk seeking behaviour such as when they do not know if they would succeed or not with reinforcement, only if the learner has something to lose if the training reinforcement is not taken. Moreover, learners with a fixed mindset, may not gain much from a training anyways. On the other side, those with growth mindset, are willing to learn in improve. Thus, training should focus on the growth mindset which can be done through reinforcements.

When designing reinforcement, it should also be taken care that the reinforcements use the similar terminologies, images, and expressions as used in a training program for better information retrieval through inforcements. Mnemonics that are suggested by Ebbinghaus for memory retention can be used in reinforcements which supports this idea as repeated visuals could benefit from mnemonic techniques (Wurth & Wurth, 2018).

## **2.8 L&D ADOPTION IN SMALL AND MEDIUM ENTERPRISES**

Training has observed to be low on priority for SMEs as compared to large enterprises because of their financial constraints. Moreover, these organization has limited time to realize the impact of learning and development because of high attrition such that their employees leave the organizations before training can show an impact on personnel or organizational performance (Geethalakshmi & Karthick, 2019). Thus, these enterprises do not have an inclination towards training. Training programs that are delivered in SMEs are often reactive, short-term, and unplanned. However, research has shown potential of adoption of training in SMEs as it can help enhance performance, improve work environment, and support inclusive growth. However, despite this importance, SMEs are mostly conducting training only to solve immediate problems or to meet the needs of ISO compliance. One of the reasons could be the lack of their understanding of the strategic side of HRM and talent development as they still follow traditional personnel management processes. As per CII, 80% of small and 20% of medium size companies in India do not even have a formal HR department. These firms are observed to be using On the job training as the method of employee development and are mostly using internal experts for training. The SMEs see structured and external training as a cost. However, the lack of understanding and inclination towards formal HR and L&D also has consequences as lower achievements and higher degree of issues to resolve.

To realize full potential of their ability to produce and grow, SMEs need to bring a change through formalization of HR and Talent Development processes. Also, to meet the needs of quality in performance, products, and service deliveries, SMEs need effective training programs. Moreover, with the use of L&D practices, SMEs can achieve a number of benefits such as creation of a positive social contract and enhancement of employee commitment (Das, 2007).

However, if the L&D has to be adopted by SMEs, some more challenges also have to be addressed that stand as the barrier to adoption besides the limited financial resources. One challenge is due to the greater degree of control by founders on employee development. As their focus remains on marketing and revenue generation, their inclination towards employee development also follows the same direction putting training as the least priority. Moreover, short-term survival being the focus of these SMEs, further shift their resources towards other practices compared to L&D. The companies often prefer to conduct unstructured reactive training required to meet immediate needs based on workplace needs. Following a structured and long-term approach adds to cost and also lead to loss of mandays that these organizations do not see as affordable. Other external barriers such as political instability, taxes, and lack of information also limit their capability to administer training programs that are efficient (Khosla & Sharma, 2014).

## **2.9 SUMMARY**

So far, from the researchers observed, it can be said that L&D can be used as an effective strategy for employee behavior change by IT companies. Understanding what impact does L&D practices have on employee behavior is more of a business question. Since L&D has recently seen more as a strategic partner for organizations that want this practice to provide pieces of evidence of business results, it is worthwhile understanding the impact. For measuring the impact, the Kirkpatrick model can be used as a guidance that provides a framework for measuring training impact on 4 levels – Learning (Level 1), Application (Level 2), Behavior (Level 3), and Results (Level 4).

It was established in the beginning during the discussion of the definition of learning that the intention of learning is behavior change. Taking that view forward, the researcher believes that the real impact of training can only be observed from level 3 which measures behavioral impact of training on employees. The impact measurement at levels 1 & 2 have been standard practices in organizations and are immediately conducted post training but in order to measure the impact at level 3 from which, the true outcomes are revealed, L&D practitioners have to wait for the learning to take effect. As per Wendy Kirkpatrick, level 3 impact is difficult to reciprocate unless employees are provided support drivers post-training to reinforce behavioral change. From this view, she suggests modification in the training design element and suggests that the designs must not just include the critical behavior that employees need to display in order to complete tasks using developed competencies but also have the plan to add drivers that can support their development and create a performance that is closer to the interest of business stakeholders of an organization.

Further, the research also saw that while the steps involved in L&D design are defined, they have not been empirically studied in depth to understand the role they play in creating effectiveness in an L&D program. The connection between the design and training outcome is largely not understood.

Considering the glaring research gaps in the areas of learning design, impact analysis, and its application in MSME, the research proposes to conduct a primary empirical investigation on the possibility of implementation of L&D in IT MSMEs in India. As the model is largely implemented in large organizations, the research intends to



draw the lessons from those involved in these implementations to create an adaptation of L&D suitable for MSMEs in India.

### CHAPTER III: METHODOLOGY

#### **3.1 OVERVIEW OF THE RESEARCH PROBLEM**

This research sought to understand the impact of learning and development on employee behaviour and found ways to support its implementation in SMEs by

understanding which practices influence behaviour and are essential for the success in an IT organization.

This exploration needed a deep understanding of learning and development in terms its potential for success in an SME in India and its capability to bring a behavior change in employees to improve their performance thereby benefiting organization. The idea is not just to confirm what impact does practice of learning and development has on employee behavior but also how does it impacts behavior as well as come up with a model of effective implementation while navigating through the challenges SMEs face in adoption. While quantitative research methods can only be useful in testing and the impact of L&D on employee behavior, understanding the causes of this influence required conceptual inquiry into the subject. A major understanding of the same was achieved by talking to people who put L&D into practice and experienced its impacts. Thus, for a complete investigation on the topic, the researcher decided to conduct mixed research using both quantitative and qualitative methods of inquiry. Furthermore, to corroborate the findings from multiple sources in multiple ways, the researcher chose the approach of triangulation by conducting interviews and focus group discussion, covert observation, and an experiment.

### **3.2 OPERATIONALIZATION OF THEORETICAL CONSTRUCTS**

This chapter discusses the theoretical constructs involved in the investigation of impact of L&D on employee behavior in IT SMEs which uses Participatory Action Research (PAR) involving interviews, focus group discussion and implementation of

L&D in two companies that are recorded as embedded case studies involving experiment and covert observation methods of data collection.

A participatory action research (PAR) methodology was selected by the researcher for the current investigation as it can utilize community-based participation to create action from theory. It is most appropriate in situations where a change is needed in a collective behavior. The researcher wanted to investigate the approach that small and medium (SME) enterprises take to manage the learning and development (L&D) of employees and understand the behavior of employees that is affected by the process. The implementation of L&D practices, earlier research has observed as explored in the literature review in organizations have the potential to impact the behavior and intention of employees such that it can bring a behavior change.

In the academic arena teachers and researchers are encouraged to collaboratively investigate the effectiveness of instructional approaches so that student learning experience can be improved through action research. However, this practice is rarely found to be followed in the management arena when employee learning is involved. For the purpose of improvement in employee learning, this research uses the participatory action research (PAR) to launch a collaborative inquiry between researcher and community involving management, learning and development professionals, and employees of IT organizations.

The study investigated two primary theoretical constructs including employee behavior which is seen as actions and attitudes displayed by employees of an

organization and Learning and Development (L&D) which is defined as a structured program designed to enhance knowledge, skills, and competencies of employees.

The investigation involved two case studies. In one case study, a Mumbai-based IT company with 70 employee strength was involved in which a single training program was implemented with reinforcements. The implementation involved all the essentials steps of L&D including business needs analysis to identify business objectives of the company behind training, Learning Needs Analysis to assess specific learning needs of employees, Training Design for developing structure and content of training, Delivery & Facilitation involving interactive sessions, reinforcement through gamified learning using a board game, and impact evaluation through an experimental method.

The second case study involved a Pune-based IT company with 300 employees where a full-month L&D intervention was launched consisting of multiple training sessions and topics for a small group of 12 new joiners in their Pune office. Since this case study was a covert observation intended to surpass the challenges of biases from learners and leaders, the company professionals were not informed about the observation. The researcher joined the organization as an L&D consultant to become the part of the system for this observation. Interview with the Training head and the discussions with the learners helped researcher identify business goals and understand training needs of learners. Following this inquiry was the design of a structured training program involving 5 trainers who also acted as subject matter experts to support development and delivery of training content. The researcher herself designed and delivered some of the training sessions and reinforcements while also acted as a facilitator for training sessions

delivered by other trainers. Throughout the implementation of a month involving 17 working days, the researcher observed the behavior of learners to understand the impact of L&D on them. The data obtained from this observation was used for the evaluation of the training program.

For measuring employee behavior change, the researcher used BARS methodology in the first experiment-based case study. The BARS method utilized a Google Form based questionnaire that was answered by the researcher herself after observing learners perform a set of tasks that required application of learning. In the second case study, the researcher used observation methods to record training impact. The impact was observed from the observation of how learners applied the learning and performed during intervention. The active discussions were also used to gather insights using feedback from learners to understand the effectiveness of the interventions from their perspectives.

This research used multiple methods of data collection including semi-structured interviews, focus group discussions, and observations. The interviews involved 31 respondents who were L&D professionals, IT Leaders, and IT employees. Focus group discussion involved four respondents out of which three were L&D professionals and one was an IT leader. The observations were a part of case studies and involved 72 employees as learners, 5 trainers, and two IT leaders. These observations from case study investigations revealed insights on impact of L&D on employee behavior as well as allowed researcher to explore the process of implementation in-depth.

### **3.3 RESEARCH PURPOSE AND QUESTIONS**

This research is an attempt to understand human behavior at work and thus, used social science research to provide a methodological approach to examining behavior. The research used positivist epistemology in order to explore required knowledge and its acquisition. The positivists approach suggested that an objective reality of anything can exist independent of its observer and this also applies to behavior. Thus, behavior is an observable thing.

The purpose of this research is to investigate the impact of L&D on employee behaviour in Small and Medium (SME) IT companies in India. By employing PAR research, this study implemented L&D interventions in two companies from Mumbai and Pune to evaluate L&D processes and behaviour change in employees exposed to learning interventions. The findings from this research contribute to the development of an implementation model of L&D for SMEs that is capable of addressing challenges and constraints of SMEs while ensuring essential and impactful L&D practices are implemented.

This research answers following key questions:

1. Does Learning and Development interventions impact employee behaviour?

This question seeks to determine if the implementation of L&D leads to an observable change in employee behaviour.

2. What kind of impact does Learning and Development have on employee behaviour in an organization?

The question aims to explore the nature and extent of the impact of L&D on employee behaviour including performance and decision to stay with an organization.

3. What Learning and Development model can be recommended for a positive influence on employee behaviour for a small and medium IT enterprise?

This question focuses on identifying and recommending an effective model of L&D implementation adopted by IT SMEs in India to create a positive influence of employee behaviour, considering the constraints and availability of resources within organizations.

The research involved two case studies:

1. Mumbai based IT company: This case study involved implementation of a single training program with a reinforcement. The essentials steps of L&D including Business Needs Analysis, Learning Needs Analysis, Training Delivery & Facilitation, Reinforcement, and Impact Evaluation were followed for 30 investigated employees for the company as the experimental group while control group of 30 remaining employees were not given reinforcement which is a major differentiator between training and L&D. This helped researchers understand if the impact on the employee behavior is due to only training or due to a combination of training and reinforcement.

2. Pune- based IT company: This case study involved implementation of a full-month intervention consisting of a range of training programs and reinforcements including the use of gamification in learning in the form of a physical board game as a reinforcer. Other reinforcement methods used during the intervention included reinforcements to fill knowledge gap, fill skill gap, deal with motivation gaps, address communication gaps, address environmental gaps (Lambda Solutions, 2018). To design these reinforcements, a number of methods were used including refresher sessions, project assignments,

gamification, post-training reading materials, assessments, interactive activities, videos, constructive feedbacks, discussion sessions, teach-back sessions, hands-on practice, and personal counseling.

### **3.4 RESEARCH DESIGN**

This research primarily involved engagement with Learning and development Experts, IT Leaders, and IT employees to gather perspectives as they are affected by the change proposed by the researcher. The researcher used learning and development as a measure for behavior change in SMEs. The participatory approach allowed researcher to receive contributions from the communities relevant to the real-world application of L&D. As the first step of the research, the researcher identified the fundamental learning needs of SMEs in the context of learning and development of employees. Next, a partnership between the researcher and the community experts, leaders, and employees helped identify the best choices for the implementation of L&D for SMEs so as to bring the intended results in the form of positive change in behavior.

The investigation involved selection of the methods and tools to be used for the L&D taking two case studies of IT companies. These included exploration on the methods used for analyzing learning needs, designing training programs, delivering training programs, use of reinforcement strategies, and impact evaluation measures. Since the research is focused on behavioral change, the research uses Behaviorally Anchored Rating Scale (BARS) to measure behavioral impact. For the action research, the



researcher created an adapted model of L&D for SME implementation and introduced the same in one IT organization from Mumbai and another from Pune. While in Mumbai-based organization, an experiment was conducted to confirm the impact of L&D on employee behaviour, the Pune based company was exposed to a month-long L&D intervention that involved demonstration of all the steps involved in L&D. The researcher observed the application of L&D in the company silently as a covert observer who was a part of the system to understand how L&D practices create impact on the learners without adding any bias that could result from the knowledge of observation.

As per Lewin Kurt, the German-American psychologist who coined the term PAR, the process of behavior change happens in three steps including unfreezing that is the disclosure of the challenge, changing which involves diagnosis with testing of new approaches, and application of the new approach. The researcher used the approach to investigate the current area of investigation by understanding the challenges, such as the unfreezing process, faced by IT organizations, L&D, and positive employee behavior. Further, it explored the model of L&D using mixed research involving investigation of the practice through interviews of L&D professionals. The outcome of this stage, also called the changing state in terms of PAR, was the identification of an L&D model adapted to the needs of SMEs such that it can be implemented in an IT organization. The changing stage would involve research on L&D models, their adaptation, and the implementation of the same in an IT organization. Lastly, for refreezing, the L&D process that is adopted by an SME would be evaluated for the behavioral impact it

brought about. For this, the researcher used Kirkpatrick's model of training evaluation which allowed researcher to study the impact of L&D interventions on employee behavior.

The sequence of study did not follow the same process of behaviour change but was sequenced logically as per the research needs. The first step was the study of literature and preliminary discussions with L&D experts and IT Leaders to understand their learning needs that helped researcher come up with interventions for investigation. For this purpose, the researcher chose 2 companies as case studies. The first organization was a Mumbai based IT firm that employee 70 people. From these 60 employees were given exposure to traditional training and L&D intervention in control and experimental groups of same size to understand how these practices impacted their behaviour. The training group was given exposure to only a training program while L&D group was also introduced to reinforcement in the form of gamified learning. The experiment helped researcher confirm the differential impact of training in two approaches. The research was followed by a covert observation case study with a Pune-based IT company in which all steps of L&D were implemented to investigate not just the impact of L&D but also to identify the impacting factors and understand necessities and challenges in implementation of L&D.

Following this case study, the researcher interviewed L&D and IT leaders and employees to gather their views on the scope of implementation and impact of L&D for

employee behavior modification. A focus group discussion was also conducted gathering inputs from leaders from the space of L&D and IT to understand the scope of L&D implementation in SMEs to bring positive behavior change. The data collected from covert observation, interviews, and focus group was combined and analyze collectively on the software Atlas.ti.

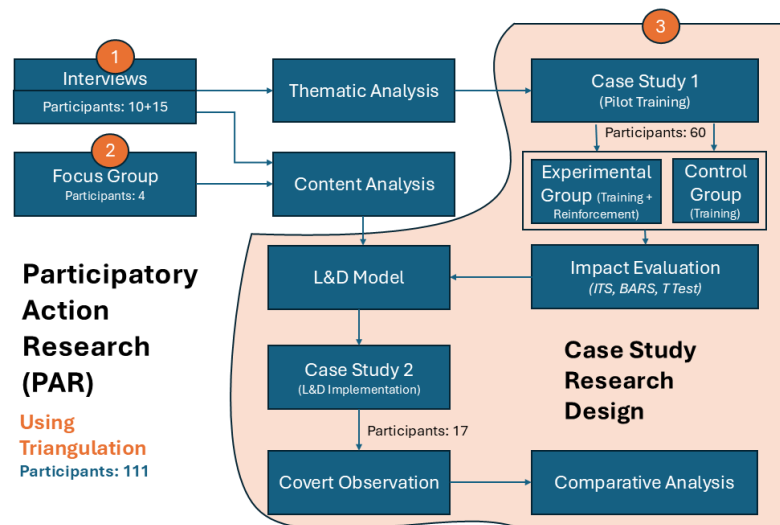


Figure 4: Research Methodology

The understanding of impact of learning and development on IT companies required a subjective inquiry with stakeholders of the practice that are not homogenous but would involve IT employees, IT leaders, and L&D professionals. Considering that the research needs to gather multiple perspectives from people using multiple methods, triangulation was seen as a useful as a mixed method as it would allow not just the accomodation of multiple views but also multiple sources, and data collection methods. Traingulation allows integration of qualitative and quantitative data from different

sources thereby maximizing the strength of research and minimizing the drawbacks that individual methods might carry.

The integration of data in mixed research can be done at different levels including designing, methodical integration, during interpretation, and while reporting. Considering the complex nature of this research, the research did the integration at different levels to arrive at the final findings as explained below:

Design Level Integration: At the design level, the integration can allow using findings of one technique as inputs for the other method. The research used true experimental design with pre-test-post-test control group method to understand how impact of learning and development is different from traditional training methods. While in traditional ways of training, training is treated as a one time event, in the learning and development approach, training is followed by reinforcements to enhance learning outcomes. In this method, the researcher randomly selected 30 respondents for experimental group and 30 for control group from a Mumbai based IT company to perform the study at the same time.

While Control group was only taken through a training session, the experimental group was given exposure to reinforcement methods like additional reading materials, online assessment, and gamified learning activity. While they were all working in the same organization and gone through the same learning curriculum with same trainer guiding them, the only different between the two groups was the set of reinforcement activities introduced only to the experimental group. The outcome of this experiment was to prove the hypothesis that reinforcements that is a corner stone of learning and development system is a positive change in behaviour. For this, the researcher used

Behaviorally Anchored Rating Scale was used to measure change in behaviour of employees after training and reinforcement.

Once proved that Learning and Development process is capable of bringing a positive change in behaviour, the research followed explanatory sequential design methodology to use these findings as a the base to identify learning and development practices that lead to behaviour change (Fetters, et al., 2013).

Method Level Integration: At the method level, the researcher has brought together multiple datasets obtained from covert observation case study, in-depth interviews, and focus group discussions for analysis.

Reporting Level Integration: While reporting the findings of this research, the researcher has integrated the narratives using weaving approach to present the results of all analysis together theme by theme (Younas, et al., 2021).

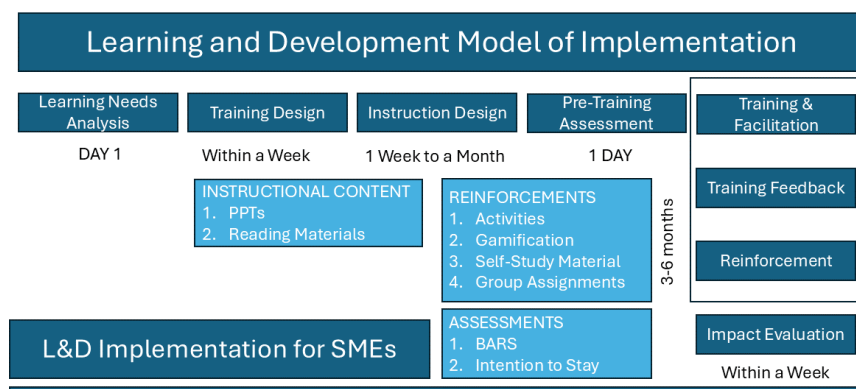


Figure 5: L&D Model of Implementation for SMEs

### 3.5 POPULATION AND SAMPLE

This research has a sample size of 114 participants who are the part of the community of L&D and IT Professionals from India who make the target population of this research. This research uses criterion sampling as it requires to collect data from respondents who meet a specific criteria.

For a case study or participatory research, purposive sampling was used by the researcher for which respondents would be recruited from the community based on their profiles. As the current research intends to understand how L&D processes would take shape in IT organizations, the researcher has chosen IT leaders, employees and L&D professionals for the research. Moreover, considering that the challenge of finding an SME operating in the IT space that does not use L&D but has inclination for implementation, the researcher is using a revelatory case sampling approach by selecting the case of one organization that is concerned with the issue of the research. The organization is selected based on the existence of the following characteristics: The company is an SME, from the IT industry, is operating in India, does not have L&D processes in place, has openness to implementation, is facing high attrition, and has a need to bring a change in their employee behavior (Puttong, 2015).

However, the first stage of the research had community involvement for the data qualitative data collection, the researcher has navigated to take the phenomenological approach in which data is collected from respondents who have been a part of the experience that is being studied. As the current research involved the implementation of learning intervention, this approach included L&D professionals who have experienced

the impacts of L&D implementation and IT leaders who have been observing the needs for behavior change in the organization and have lived with employees as well as supported employee development programs (Cash, et al., 2022).

In a phenomenological approach that is taken by the research, the aim of the research is not to generalize outcomes from sample to population but to only explain and interpret the phenomenon discussed (Guetterman, 2015). Thus, purposive sampling was used as a tool for informant selection for deciding the sample size for selecting respondents from the L&D and IT communities. Methodological studies that have explored sample sizes used in interviews for grounded theory or phenomenological research have discovered that saturation of information obtained from informants is reached in most cases after the 12th interview, as suggested by Guest, Bunce, and Johnson who investigated the saturation for 60 interviews. With this understanding, the researcher has decided to use a sample size of 35 for the community of respondents including L&D professionals and IT professionals that included leaders and employees (Vasileiou, et al., 2018).

### **3.6 PARTICIPANT SELECTION**

There were three kinds of respondents involved in this research including:

- IT professionals who were working in IT Small and Medium Enterprises and were exposed to a new L&D intervention targeted to behaviour modification during which the researcher collected data

- Learning & Development Professionals who have been part of L&D interventions that had behaviorial training provided to employees and had high level of working knowledge in the area of L&D
- IT leaders working for SMEs in India who were familiar with L&D interventions and were exposed to or being a part of behaviorial training interventions.

### 3.7 INSTRUMENTATION

This research used Google forms for marketing observations revealed from respondents and Zoom conferencing tool to conduct interviews with respondents. To measure behaviour, it used Behaviorially Anchored Rating Scale for measuring behaviour of learners. The researcher followed all the procedures and documentation needs for conducting L&D intervention that included Learning Needs Analysis Questionnaire, Assessment Tools for evaluation, Feedback forms from learners, Authoring and video creation tools like Articulate 360 and Vyond to create modules for eLearning, Microsoft Office tool for making training presentations, providing notes, and aanlysis sheets to learners, eLearning platforms like Study.com to delivery online sessions, and Adobe PDF for documening lessons.

### 3.8 DATA COLLECTION PROCEDURES

This research makes use of traingulation involving three primary methods of data collection including interviews, focus group disucssions, and multiple case studies.

Sr. No.	Research Duration	Method of Data Collection	Number of Respondents	Respondents profiles
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1	2 months	Interviews	31	IT leaders, IT Employees, L&D Professionals
2	3 months	Experimental Case Study of Pilot Intervention	60	IT Employees from a Mumbai-based IT SME
3	1 Day	Focus Group Discussion	4	2 IT Leaders and 2 L&D Professionals
4	3 months	Participant Observation Case Studies for L&D Implementation	19	IT employees, IT Leaders, L&D Professionals
DURATION	9 months	SAMPLE	114	

The methods used to collect the data included interviews, focus groups, participant observations.

### **Semi-structured Interviews**

This research utilized semi-structured interview to collect participatory data from L&D and IT communities. An interview is an exchange of views between two people through conversations and when this discussed is directed towards understanding one research

subject, the interview takes the lead by asking specific questions to an interviewee. Although open ended, these questions follow a framework in a semi-structured interview allowing a researcher to cover the topic in depth. However, semi-structured approach also allows a researcher to add questions and probes during the interview if needed. A semi-structured interview can take any of the approaches from thematic, narrative, purpose-driven, autobiographical, contextual approaches. Since the research had an objective to understand the impact of Learning and Development and also, determine the factors contributing to its success to support development of an adapted model of implementation for SMEs, the research had certain themes already identified and thus, had started with a number of topics to cover during the interviews (Mashuri, et al., 2022). However, such an interview also provides flexibility to digress a bit and thus, the researcher accommodated narrative approaches used by some interviews when expressing their views. The researcher has also added probes to ensure that relevant contexts are discussed during the interview. For instance, when asking an open-ended questions to L&D professionals about the process they used, the researcher probed words like ADDIE and SAM models to understand if they have been used in practice. Also, when discussing key areas or challenges for interventions, the researcher probed the idea of behavior change as they are the constructs majorly focused in this research.

### **Case Study Research**

Yin 2003, case study answers why and how about a phenomenon that is influenced by conditions and is difficult to separate from context. It allows testing theoretical models in real-world situations. Cases were selected based on purpose and objectives.

It's an in-depth inquiry of individual, group, process, activity, situation, or event and can be descriptive or explanatory. Exploratory can have both qualitative and quantitative data.

It provides flexibility in search and openness what & where to find. Mein goal is to derive inductive generalizations that are then woven I to grounded theory to explain objects in the study. Glaser and Strauss, 1967.

Generalizations that are emergent are confirmed and not predictions made earlier. Absence of answers to research questions encouraged deeper study to understand concepts logically and create new knowledge.

Explanatory approach provides analysis, explanation, and examination. Exploratory research discovers, understands, and explores using both inductive and deductive approaches to develop themes and construction of a theory.

The research would use the case study design to analyze the implementation of learning intervention in an IT organization. As this case study would adopt the participatory approach, participants would be involved in all the stages of the research process from conceptualization to impact evaluation.

The reason for the involvement of IT leaders, employees, and L&D professionals in the case study is that the researcher is aligned with the idea of constructive pragmatism which assumes reality to be subjective such that the finality of its knowledge is influenced by different perspectives. For the implementation of the case study-based PAR, the process illustrated in the diagram below will be followed.

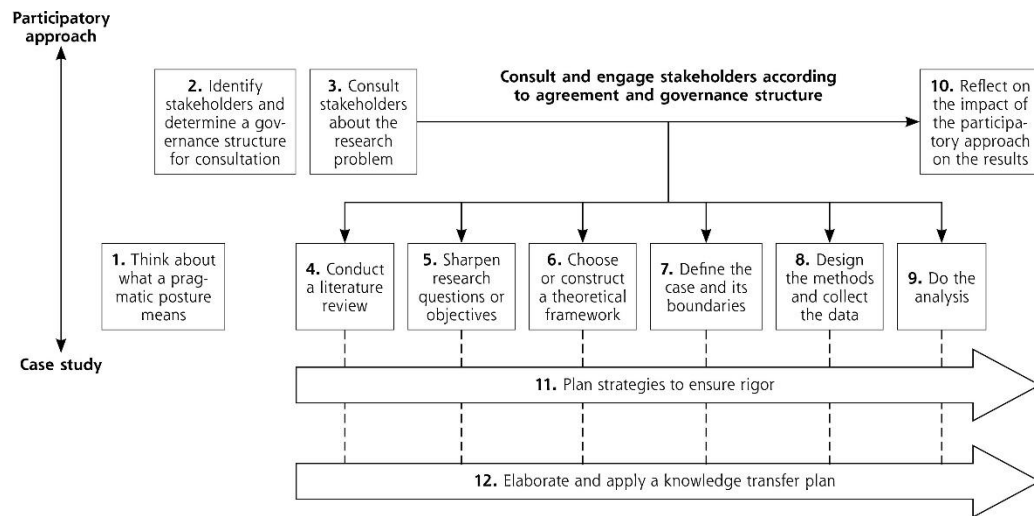


Figure 6: A case study with a participatory approach

The model above is proposed by Hudon et. al, that combined PAR approach with case study methodology using a constructivist philosophy of research. In the current research, IT leaders, employees, and L&D professionals are observed as the stakeholders in the process. The governance model proposes the involvement of these stakeholders in the research based on their availability, areas of interest, and expertise concerning the topic. Based on their levels of expertise, they would be involved in specific steps of the PAR project.

The intensity of their involvement will vary accordingly as they would be involved in a number of selected stages depending on their roles (Hudon, et al., 2021). The table below identifies the participants and their level of involvement in different stages of this research.

PA R Stage	Research Action	Participants & Resources
Unf reezing	Secondary research	Journals, Books, L&D Professionals
	Primary qualitative research	IT leaders L&D Professionals
	L&D model adaptation for SMEs	Researcher
Cha nging	Learning Needs Analysis	IT Leader IT Employees
	Learning Intervention Design	Researcher IT leader
	Content Development	Researcher Instructional Designer
Ref reezing	Implementation through training delivery	Researcher Trainer IT leader IT employees
	Impact Evaluation	Researcher IT Employees

		IT Leader
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### **Participant Observation**

It is not always possible for a researcher to observe the human behavior of every individual involved in a research and thus, often depends on gathering this information indirectly through those who are witness to the events in question. However, in some cases where behavior comparison is needed for individual cases, it becomes essential to have an accurate observation. In this research, Behaviorally Anchored Rating Scale is used as an instrument of measurement to measure and compare behavior displayed by learners pre- and post learning intervention. For capturing their behavioral displays, the researcher has thus, used participant observation technique by becoming a neutral observant in the active project for one of the cases covered in this research. While this observation was limited to the context of study of specific behavior in the context of training, the researcher used the method for an in-depth exploration of another case of an IT company.

The resesarcher has used participant observation as one method of inquiry from inside the organization by being a silent observer involved in learning and development to capture experiences (Iacono, et al., 2009). An active and covert observation method has been followed by the researcher who has been an active participant in the process but has not informed participants about the role of the researcher and that they are being observed. Thus, the change in behavior was not influenced by the research but only by the process of Learning and Development implemented in the organization (Brancati, 2018). To collate the observation, the resesarcher collected all experiences and followed

them along the Spradley's nine dimensions including space, actor, activity, object, act, event, time, goal, and feeling (Reeves, et al., 2013).

While participant observation is primarily used in ethnographic researches, the researcher saw its application in the field of education and in the current context utilized it. The method allowed researcher to immerse herself in the learning environment of the studied companies allowing greater access to data through observation of interactions between participants. The researcher utilized active observation in both overt and covert dimensions to take full advantage of the methodology. Through overt observation, in which the learners were aware of the role of the researcher, the researcher recorded the change in the behaviour of the attendees of a training program for one IT organization. However, considering the disadvantage of the possibility of influence of researcher's presence on responses, the researcher, chose the covert approach to observation for the second IT organization to record a change in behaviour. The research is primarily using active methods of research including observation despite running the risk of creating and influence that could result into a behaviour change. However, this drawback is not a concern but a boon in the current context considering the primary role of researcher as an L&D professional. As a facilitator in the L&D setting, the researcher is required to bring about the change in behaviour which is the primary goal of a learning and development intervention.

### **3.9 BEHAVIORALLY ANCHORED RATING SCALE**

Behaviorally Anchored Rating Scales (BARS) consists of a continuum defining behaviour of individuals at different levels of performance. To define each level,

examples of workplace behaviour are gathered from subject matter experts (SMEs) that help in identifying performance dimensions in terms of psychological attributes related to a job. BARS can form the basis for designing as well as evaluating training programs. SME inputs help in identifying critical incidences which is the first step to develop a scale. A critical incidence typically identifies a situation, behaviour and result of the behaviour (Kell, et al., 2017).

The reliability and construct validity of the BARS scale was tested in a research conducted on 757 nursing assistants from 44 long-term care facilities. Cronback's alpha was found to be 0.78 on an average between independent observers and supervisors (Stoskopf, et al., 1992). BARS method was discovered to be providing good levels of variability, validity, and rating accuracy in several researches (Debnath, et al., 2015).

In the current research, the BARS scale was developed for measuring behaviour. The management team played the role of SME in this research. They helped identify critical incidences. From the critical incidences, some common themes can be identified and from them, performance dimensions can be extracted.

The table below shows the summary of the common themes from shared critical incidences:

Critical Incidence	Background Situation	Behaviour	Result
Presentation Development	Requirement for the creation of a	ChatGPT is used to generate content for	ChatGPT to give an output containing



	presentation for an organization	a presentation.	text to be put on each slide of a presentation
LinkedIn Post Creation	Employees have to create posts for LinkedIn that are relevant to their profile and promote their work	ChatGPT is used to generate ideas and develop content for a LinkedIn post	ChatGPT to give an output containing a list of topics for posting to select from and generate post on selected topic
Webpage content development	Content creators working on client website development project have to write content sections like About Us	ChatGPT is used to generate content for different sections of a web page.	ChatGPT to give an output containing text specific to a webpage section such as About Us containing details of the organization
Coding for Application Development	Developers often need help in finding codes to support their work and also understand errors appearing in their programs	ChatGPT is used to generate codes for specific programming actions and identifying causes of errors and remedies for	ChatGPT to give an output containing a Python code for specific task of development and provide descriptions and corrective actions in case of

		correction.	encountering errors in the coding output
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For each of the identified theme above, the current and desired behaviour were discussed to identify performance dimensions while using ChatGPT as an Artificial Intelligence for performing the identified tasks. Based on these dimensions, four levels of performance were determined and used for creating the scale for measurement and evaluation of the behavior.

### **3.10 DATA ANALYSIS**

Since this is a mixed research in which data has been sequentially collected using different methods and involving different respondents, the data analysis has also been conducted in a sequence starting with Thematic Analysis of the interview data. The outcome of this analysis has informed the model for the implementation of a learning intervention in an IT SME for pilot testing. Further the data obtained from focus group discussion and interviews has been analysed for content. For analysing the quantitative data of experiment conducted in one of the IT company as a case, t-test comparison has been used. The collective insights from content analysis and the t-test have been used to inform the model of L&D implementation in the second case of an IT company. The data then obtained through covert observation from this implementation has been analysed using comparative analysis to compare the outcomes with the other case study for developing combined insights on the impact of Learning and Development on Employee behaviour in Indian IT SMEs.

### **3.11 RESEARCH DESIGN LIMITATIONS**

Since the researcher has used criterion sampling and have a limited sample size of 106 respondents, the research cannot be generalised to a larger population of IT companies or employees.

### **3.12 CONCLUSION**

Participative Action Research (PAR) is an emerging field of inquiry that combines organizational knowledge with applied behavioral science allowing a collaborative inquiry on processes to support development. It comprises not just observation, description, and consideration but also action which is also monitored and then reflected upon to derive conclusions.

For the current research, the researcher has selected PAR to understand the learning needs of Indian SMEs in the IT industry as the approach can utilize community-based participation to create action from theory. Because of the rapidly expanding technologies, project-based structures, increase in the remote-working culture, and self-managed team formations, training has become one essential component of their work. Earlier research has posted that L&D practices impact the behavior. As high attrition is a major problem faced by IT companies in India, L&D can be used to bring a positive change in employee behavior.

PAR has been used in the academic arena to collaboratively investigate the effectiveness of instructional approaches so that student learning experience can be improved through action research. However, this practice is rarely found to be followed in the management arena when employee learning is involved. The researcher proposes to use PAR to launch a collaborative inquiry between the researcher and community

involving management, learning and development professionals, and employees of IT organizations.

The researcher has selected a Mumbai-based IT organization as a case study for PAR to propagate this research. This researcher would initiate the investigation by conducting interviews with the community representatives involving 50 L&D Experts, IT Leaders, and IT employees to gather perspectives. Through this, the researcher would identify the learning needs of SME employees. Inquiry with L&D experts would help identify the best choices for the implementation of L&D for SMEs so as to bring the intended results in the form of positive change in behavior. Qualitative data would be collected from the respondents through interviews and the same would be analyzed using a thematic approach to identify components for L&D intervention design.

Further, the selected IT organization would be involved in the action as a case. A learning intervention would be introduced to the company considering it as a measure for behavior change in SMEs. The learning intervention would be designed based on the outcome of the analysis performed on the qualitative inquiry conducted with community representatives.

The implementation would use the standard L&D process involving learning needs analysis, training design, training delivery, reinforcement, and impact evaluation. The Behaviorally Anchored Rating Scale (BARS) would be used to measure behavioral impact.

## CHAPTER IV:

### RESULTS

#### 4.1 DOES LEARNING AND DEVELOPMENT INTERVENTION IMPACT EMPLOYEE BEHAVIOR?

##### Null Hypothesis ( $H_0$ ):

There is no significant change in behaviour after the training.

##### Alternate Hypothesis ( $H_1$ ):

There is a significant change in behaviour after the training.

Control Group	Negative Ranks	Positive Ranks	Ties	Z-Value	Significance
Before I give a prompt to ChatGPT	0	3	27	-1.732	0.083
When I give prompt to ChatGPT	0	3	27	-1.732	0.083
When I use ChatGPT for website content	0	1	29	-1	0.317
When I use ChatGPT for Social Media content	0	3	27	-1.732	0.083
When I use ChatGPT for Powerpoint Presentation slides	0	1	29	-1	0.317
When I use ChatGPT for Data Gathering/Data Modeling/Validation/ Coding/UAT	0	0	30	0	1
After ChatGPT gives me content (Take the Example of PPT)	0	1	29	-1	0.317
Number of Ways ChatGPT is used	0	10	20	-3.162	0.002

A related samples non-parametric Z-test was run on the data collected from the survey of respondents who attended the training program to understand if there were differences in the proficiency level of behaviour displayed by them in using ChatGPT

before and after the training in the control group of 30 respondents. The test, as shown in the table above, revealed that only a small number of the respondents were showing a change in behaviour with a positive increase in their level. Also, since the p-value is found to be greater than 0.05, it can be concluded that these findings are not significant for the group.

The test also shows that the number of ways they could use ChatGPT after training also increased. Since the p-value of the same is less than 0.05, this finding can be called significant.

**Null Hypothesis (H<sub>0</sub>):**

There is no significant change in behaviour after the training with reinforcement.

**Alternate Hypothesis (H<sub>1</sub>):**

There is a significant change in behaviour after the training with reinforcement.

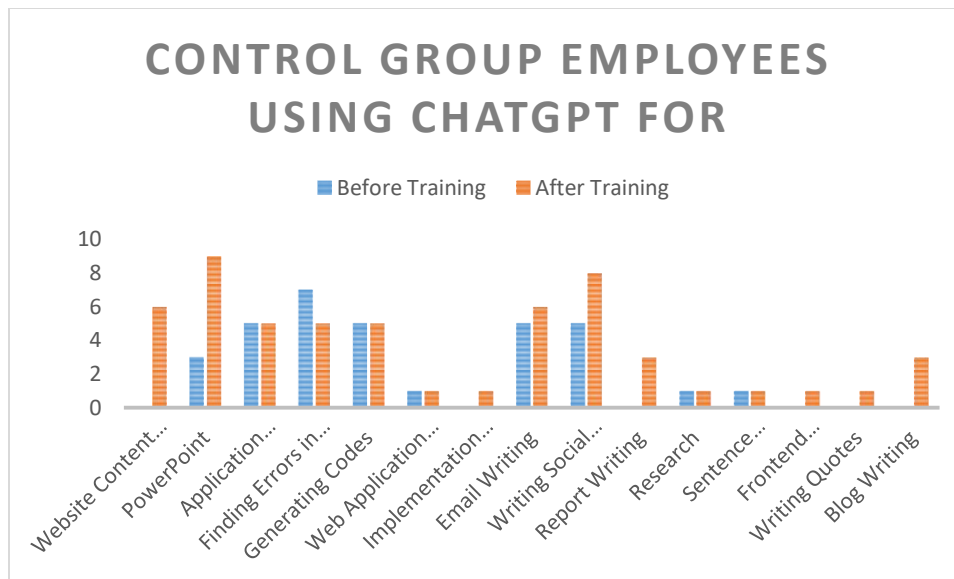
<b>Experimental Group</b>	<b>Negative Ranks</b>	<b>Positive Ranks</b>	<b>Ties</b>	<b>Z-Value</b>	<b>Significance</b>
Before I give a prompt to ChatGPT	0	30	0	-5.477	0.001
When I give prompt to ChatGPT	0	30	0	-5.477	0.001
When I use ChatGPT for website content	0	30	0	-5.477	0.001
When I use ChatGPT for Social Media content	0	30	0	-5.477	0.001
When I use ChatGPT for Powerpoint Presentation slides	0	30	0	-5.477	0.001
When I use ChatGPT for Data Gathering/Data Modeling/Validation/ Coding/UAT	0	30	0	-5.477	0.001
After ChatGPT gives me content (Take the Example of PPT)	0	30	0	-5.477	0.001

Number of Ways ChatGPT is used	7	18	5	-2.68	0.007
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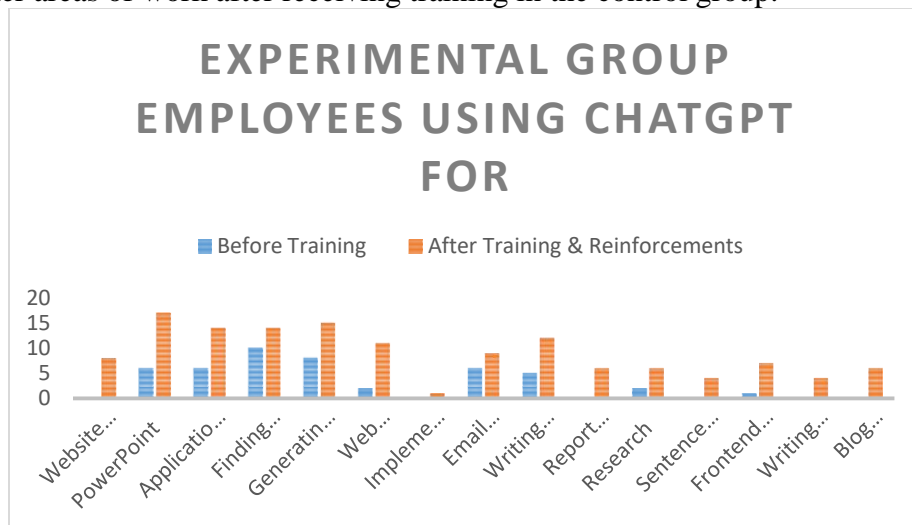
A related samples non-parametric Z-test was run on the data collected from the survey of respondents who attended the training program to understand if there were differences in the proficiency level of behaviour displayed by them in using ChatGPT before and after the training and reinforcement in the experimental group of 30 respondents. The Mann-Whitney U statistic test, as shown in the table above, revealed that only a small number of the respondents were showing a change in behaviour with a positive increase in their level. Also, since the p-value is found to be greater than 0.05, it can be concluded that these findings are not significant for the group.

The test also shows that the number of ways they could use ChatGPT after training and reinforcement have increased. Since the p-value of the same is less than 0.05, this finding can be called significant.

The test revealed z value = -5.477 which is very large in absolute terms. This indicates that the observed difference between the pre-test and post-test observations is highly unlikely to have occurred by chance if the null hypothesis is true. It has turned out to be negative which indicates that the ranks before training and reinforcement in the experimental group are systematically lower than the ranks after training and reinforcement. The result is statistically significant at the significance level of 0.001. This suggests strong evidence to reject the null hypothesis. This result strongly supports the alternative hypothesis that the behaviour are not equal in terms of their distributions.



As the graph suggests, there is a significant increase in the number of employees using ChatGPT for developing website, making PowerPoint presentations, writing social media content, reports, and blogs. However, the change is not so prominent in the use of the other areas of work after receiving training in the control group.



However, the same is not the case with the experimental group employees as the increase in the number of people using ChatGPT for multiple purposes have increased significantly for most areas of work with dominance in the usage of website content



writing, PowerPoint creation, application development, code generation, social media content, and writing reports and blogs.

## **4.2 WHAT KIND OF IMPACT DOES LEARNING AND DEVELOPMENT HAVE ON EMPLOYEE BEHAVIOR IN SME ORGANIZATION?**

### **1. Impacting factors**

#### **1.1. Directly influencing factors**

Respondents were asked if they understand any factors that directly influence the impact of Learning and Development on employee behaviour and the organization. The responses when coded generated 17 codes and their analysis helped identify ten major themes.

The thematic analysis of the interview responses revealed importance of learning and development, and highlighted it as an investment that benefits both employees and the organization. The key themes identified included:

**Win-Win Growth:** While company invests in training programs to support employee development and growth, the improvement in the performance of employees as a result also creates a win for the organization.

**Training impacts retention:** Training is crucial for employee retention as it helps them stay updated with their skills which gives them confidence, positive growth, and aligns their goals with organizational goals thereby positively affecting their choice to stay in the company.

**Future Focus:** Training helps companies stay focused on their future business goals by enabling discussions on challenges and needs of the future. These discussions

provide inputs in designing training programs to support the business goals of the company.

**Engaging Learning:** Effective training includes practical activities that go beyond just knowledge transfer to engage employees, giving them opportunities to express themselves and address their learning needs related to communication and technical skills.

**Motivation and Recognition with L&D:** L&D initiatives include acknowledgements and rewards for employees for their training achievements which motivates employees thereby creating a positive culture of learning that values individual growth influencing employee engagement and retention.

**Learning environments:** Training should meet the needs of different learning styles and provide practical and hands-on experience to learners. In-person training are often preferred over the online learning methods because of greater effectiveness.

**Role of trainers and learners:** Trainers need to establish rapport with learners and engage them while employees also need to be receptive to this process of learning to create effective outcomes.

**Commitment to learning:** Buy-in is required from both employees and the leadership in an organization to foster the culture of learning and effectiveness of L&D

**Training Challenges:** Insufficient practical knowledge is received from brief training sessions is not found enough to prepare employees

**Career Aspirations:** Employees aspire for growth within an organization and look for opportunities aligned with their career goals

The themes suggest that a culture of growth, training and recognition can impact retention and organizational success.

## **1.2. Essential supporting or moderating factors**

Respondents were asked which factors they feel can impact learning and development but not directly. There were 9 codes generated on challenges in L&D from which 12 key themes emerged.

The thematic analysis of the interview responses revealed insights on collaboration, learning, and problem solving. The key factors that support or moderate learning outcomes were identified as below:

**Collaboration and Knowledge sharing:** In addition to using historical data for finding resolutions, learning agents and employees can share knowledge gained from their experiences to solve problems efficiently.

**Continuous Learning:** It is recommended by respondents to develop ongoing training programs that encourage employees to apply their learning through hands-on projects and assignments, skill reinforcement measures, and engagement.

**Career Development Program:** Proactive career architecture development demonstrate organization's support through investment in the growth and development of employees which also positively influence retention and engagement.

**Facilitative Learning Environment:** Facilitative learning environment involves use of experiential learning, group methods, case studies, and activities that make training more engaging.

**Supportive leadership:** Leaders provide support in learning by providing guidance and mentorship to reinforce the application of learned skill on the job.

**Reinforcement:** Reinforcement after training is created in the form of structured follow-ups that include discussions, assignments, and sharing of success stories to keep up the momentum of learning.

Community Building: Developing communities of learners through creation of networks facilitate knowledge sharing and building of relationships which encourages collaborative learning to support learning culture.

The themes also included some action steps that were identified to provide support as follows:

Data-driven problem-solving: Employees can use historical data and case studies to improve their decision making efficiency. Workshops can include past cases and strategies for the same.

Engaging training programs: Using a blend of interactive methods like gamification and simulation can create engagement. Further, facilitator can encourage group dynamics and interests by adapting their content accordingly.

Clear career pathways: Developing clear career architecture documents, growth paths, skill set requirements, and associated opportunities for each role can support learning.

Peer Learning: Peer mentoring programs can help employees learn from other experienced colleagues through knowledge transfer and also enable relationship building in teams.

Regular follow-ups: Scheduling regular follow-ups with learners after training to discuss their progress on assignments and application of skills can foster accountability in them to support learning.

The factors revealed above were considered to be essential by the respondents for the success of a learning and development in an organization.

### **1.3. Nonessential supporting factors**

L&D professionals were asked if they found certain practices of L&D that were good to support the impact but not essential for the success of the organization or influential to the employee behaviour. The analysis of the codes obtained from the responses revealed a framework. To foster effective training solutions in your organization, it is essential to structure the development process thoughtfully. Here's a suggested framework:

**Identify Training Needs:** Training needs can be identified by analyzing data obtained through the review of the performance data and feedback from the previous training can help identify skill gaps in learners. Feedback can be 360-degree by gathering insights from leaders, HR, and vertical teams. The feedback from employee on the challenges they face and their suggestions for improvement can also support learning needs analysis.

**Defining Objectives:** Learning objectives can be formed from identified learning needs and they should be clear and measurable so as to clearly state which specific knowledge or skills would learners attain as a result of a learning program.

**Involvement of Subject Matter Experts (SMEs):** SMEs can collaborate with learning project managers to guide content development so as to ensure the relevance of content to the targeted job roles.

**Development of Training Solutions:** Typically, training program in SMEs was observed to be developed in-house using software tools like MS PowerPoint and Word for content creation by engaging internal teams for developing training materials. If only the budget allowed, the companies would use a learning design software to create interacting learning content. Training programs are often supported with assessments for evaluation of participants learning but their application of skills is not measured.

**Pilot programs:** Experts suggested the use of test run training programs for small groups and gathering feedback from them to make necessary adjustments before the program could be launched company-wide.

**Training Program Implementation:** During the roll-out of a training program, it is essential to ensure communication about the training program is going to learners through various channels such as emails or meetings that must encourage learners to attend by initiating dialogues to address real-time issues by the participants.

**Evaluation and Feedback:** Feedback is collected by organizations from the learners after a training program to assess effectiveness of the program and also, to improve future iterations of the same. Providing active communication channels to learners for sharing their feedback on a training program can be a way to collect this feedback.

Feedback metrics can also help evaluation performance improvement post-training.

**Continuous improvement:** Regular review of training content and its delivery methods based on the feedback received from the participants as well as any new data and job requirements obtained can help achieve continuous improvement of learning and development interventions.

The structured approach that follows the above recommendations can help improve the employee participation and impact of training programs while also being mindful of the constraints like budget.

## **2. L&D challenges causing inefficiencies**

Respondents were asked if they faced any challenges or factors that caused inefficiencies in learning and development so as to negatively affect the impact of learning on employee behaviour and organization. There were 21 codes generated on challenges in L&D from which 20 key themes emerged.

The analysis of interview data revealed certain challenges that organizations face related to L&D adoption such as:

**Time constraints:** SMEs often have strict project deadlines and thus, struggle to maintain a balance between work and training initiatives. Their training is often rushed and many times, ineffective in delivering outcomes.

Trust issues: Trust in the trainer or the consultant in their capability to bring improvement is important for learners. However, employees do not have confidence on trainers either because they are trained by subject matter experts who do not understand training or by external trainers who do not understand the business.

Cognitive biases: Employees are often limited by the cognitive biases that keeps them from sharing their problems and learning needs. This is often influenced by their perception on how this sharing would influence their image in the company or on social media if it is used as a the channel for sharing concerns. This can overshadow their real challenges.

Reactive and proactive needs: SMEs often lack resources to create systematic training programs proactively and thus, are most relying on the reactive needs generated by situations like a change in IT system.

Training engagement: While training can be delivered to employees virtually in large numbers, the behaviour change training often require in-person interaction and engagement with learners individually which is a challenge for the SMEs.

Hybrid work environment: There is a major shift from traditional office environment to hybrid work culture in IT companies and thus, there is a risk of disengagement in employees attending training programs virtually such that sustained engagement of learners becomes a challenge for L&D.

Training as investment: Training interventions are better viewed as investments and not expenses and the co-creation of training with employees can help maximize benefits from this investment by creating engagement and long-term partnership between the company and its employees. However, in SMEs, it is still seen as an expense.

Budget Constraints: SMEs operate with limited budget for training and thus, they need to set priorities to align training programs with their business goals to ensure effective use of their resources which can be challenging.

Lack of understanding of L&D role: L&D function needs to collaborate across departments in an organization to properly align with training needs of all employees. In this way, specific competencies needs at different roles can be understood for effective trianing. However, this role of L&D is unclear in SMEs as they lack its exposure which creates a lacuna.

Minimum Viable Training: SMEs need minimal but impactful training to ensure there is a buy-in from the management in terms of feasibility of implementation.

Lack of learning design expertise: Expertise in learning design is crucial for creating effective training programs but organization the cost of hiring a learning designer is often keeping companies from getting this expertise. They do not have the realization of the cost associated with poor training programs and thus, seek alternatives that are a less cost to them.

Need to continuous learning: Employees need continuous learning environment considering the fast-changing technical lanscape and the skills needed becoming obsolete soon.

1. Continuous Learning: Employees express the need for a continuous learning environment, particularly in a fast-changing technical landscape where skills can quickly become outdated.
2. Lack of Genuine Commitment to LNA: Companies often see LNA as a formality, leading to ineffective training initiatives. Employees may



not fully understand or appreciate the value of a thorough needs analysis before executing training programs.

3. **Mentorship Programs as Formalities:** Assigned mentors sometimes view their roles as mere responsibilities without genuine engagement, leading to missed opportunities for valuable learning experiences.
4. **Ineffective Training Delivery:** Training sessions often prioritize theoretical knowledge over practical application, especially in virtual formats. Inactive learners have a hard time overcoming material fatigue.
5. **Lack of Measurement and Feedback:** Without strong metrics and feedback regarding a training program, it becomes almost impossible to know its effectiveness. This can lead to ineffective training cycles that repeat and reinforce the same mistakes over and over again.
6. **Insufficient Integration between Training Provided and the Organizational Goals:** Some Manager may order for a training program to be developed without appreciating fully the issues at hand and how the training fits within the targets of the business. This results to wasted effort caused by lack of proper predefined goals.

The synthesized focus of the report draws attention to the fact that it is possible to design an effective framework political climate and structure that builds and deeply entrenches trust, employee engagement, training effectiveness against organizational goals, budget cuts, and shifts in the nature of work.

It is also possible to rationalize some of these inefficiencies along the following eight headings.

1. Enhance the LNA Process:

- a. Get Multiple Stakeholders Involved: Include the learners, their supervisors, teammates, and even senior management in the LNA for the process. This ensures that all voices are heard that will directly shape the training and guarantee the attainment of organizational goals.
- b. Enhance with Surveys and Interviews: Ensure that there are focus group discussions as well as interviews with a wide range of stakeholders so that their voices are reflected in the emerging training program.

2. Advanced Mentorship Programs:

- a. a. Resources for Mentors: It may be beneficial to give some form of training to mentors that outlines their roles and how they can best support mentees so that the relationship cultivated is more than just formal.
- b. b. Scheduled Check-ins: Set up scheduled check-ins that are more focused on assessing mentorship development, as well as issues and challenges that may be present.

3. Revise Training Delivery

- a. Hands-on Training: For better engagement and retention, introduce hands-on training, simulations, case studies, and role plays to all training sessions. Ensure training provides all participants with the opportunity to learn by doing.
- b. Explore hybrid models that blend

### **3. Impact**

#### **3.1. Direct impact**

##### **3.1.1.Retention**

##### **3.1.1.1. Causes of attrition**

IT leadership studies looking into the reasons behind employee turnover identify lack of L&D as a potential cause for poor retention. It seems that you experienced quite a career shift from IBM to Honeywell because of the commuting difficulties instead of for financial reasons. This is a scenario that many people seem to resonate with who shift jobs to achieve balance in their lives rather than just for compensation. It appears that the work atmosphere at IBM seemed to be an additional reason for stress and unhappiness among workforce which most likely influenced your choice as well.

Sustained pressure to meet targets as well as stress from work can result in burnout not only professionally but personally as well. The situation may be different in smaller companies where relationships and hierarchies can shape how concerns are resolved. If the HR department understands what the problems are but they do not know how to solve them, the situation must be extremely challenging for everyone in the organization and also the leadership.

Due to the many concerns raised by employees, creating a workplace culture that fosters well-being can enhance retention as well as job satisfaction. Well-functioning relations and solid support of HR and L&D teams helps to build a more favorable workplace.

### 3.1.1.2. Factors of retention

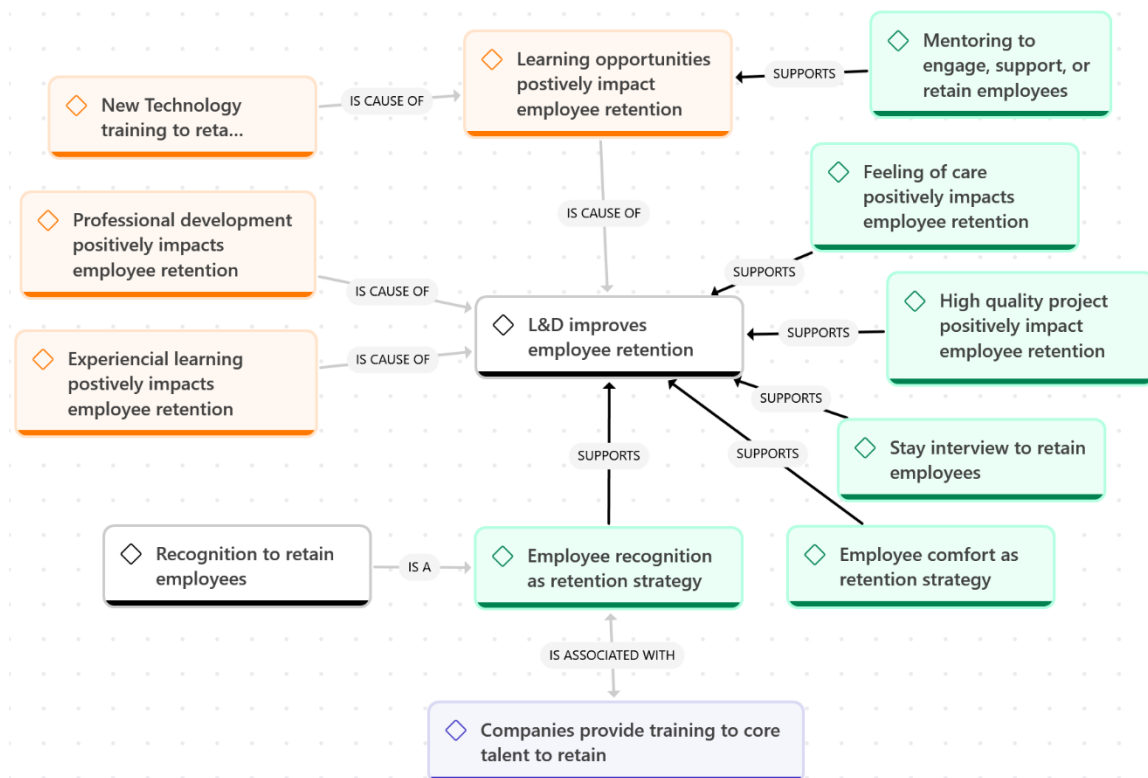


Figure 7: Employee Retention Network Diagram

The network analysis extracted from Atlas.ti above shows the relationships between identified factors that improve employee retention as per the respondents. As shown retention is directly caused by learning opportunities, new technology training, professional development, and

experiential learning while factors providing training to core talent, employee cognition, stay interviews, high quality projects, feeling of care, and mentoring are factors that support learning and development function in contributing to retention.

As suggested from the analysis, employees can be motivated and feel appreciated when they get trained on new technologies and soft skills. But in repetitive positions such as call center positions, this motivation can dip real low. Employees may start to doubt the firm's concern for their well being, especially when there are no concrete actions taken that show concern.

The narratives shared by respondents included an example of Capgemini, stating that many employees stayed and were even motivated because of projects and trainings, even when pay was on the lower end. This emphasises that organisations need to invest in employees by helping them grow through training, mentorship, and giving appropriate recognition. Aligning skills investment with career architecture enhances retention over time.

The problem is that in most organisations, learning and development is regarded as a chore. In most employees who desire, and are in tune with their career paths, having relevant programs, loyalty, and performance is improved. All in all, focusing on the most appropriate areas related to training serves to boost retention morale, and culminatively organisational success, however it requires commitment and strategic planning.

### **3.1.1.3. Strategies for retention**

IT Leaders and professionals were interviewed to understand which strategies or practiced are followed in their organization to retain employees and the coding of their responses generated 6 codes from which eight key themes were identified. The provided text discusses various strategies and initiatives aimed at retaining core and critical talent within an organization. Here's a summary of the key points:

1. **Retention Focus:** The organization prioritized retaining core and critical employees rather than offering salary increases across the board. Identifying these key individuals was crucial for the rebuilding and continuity of the organization.
2. **Incentive Packages:** A compensation strategy was implemented that involved distributing pay increases quarterly instead of annually. This "drip arrangement" aimed to maintain employee motivation and commitment over time.
3. **Social Engagement Initiatives:** HR organized social activities, such as team lunches and acknowledgment events, to cultivate a positive workplace atmosphere. This was intended to make employees feel valued and respected, thereby reducing turnover likelihood.
4. **Recognition Programs:** Implementation of employee recognition programs, such as "Star Awards," helped boost morale and create a culture of appreciation. However, personal reasons (like relocation) could still lead to employee departures despite these initiatives.
5. **Training and Development:** The organisation considered training employees in new technologies very important. This not only prepared them for better-paying projects but also got the workforce aligned with the standards across the industry. Development strategy included newly-designed training sessions, workshops, and strategic orientation activities.
6. **Collaboration and Communication:** There was significant focus on enhancing collaboration between onshore and offshore teams, more in the context of

emerging tech areas like AI. Improved communication practices definitely had a positive influence on the project outcomes.

7. **Mentoring and Recognition:** Mentoring programs and recognition for completion of training can foster a culture of lifelong learning and achievement in its own right, thus enhancing retention.
8. **Employee Engagement:** Employees seemed to be enthusiastic about stay interviews conducted by their managers, indicating that retention is viewed proactively through dialogue about career aspirations and job satisfaction

In summary, putting a multi-faceted strategy in place by way of incentive payments, socialization and recognition, and even training was an option considered by the organization to prevent talent attrition, particularly of its critical talent.

#### **4.3 What Learning and Development model can be recommended for a positive influence on employee behavior for Small and Medium IT enterprises in India?**

##### **1. L&D process**

##### **1.1. Discovery step**

##### **1.1.1. Organizational/business needs**

L&D experts and IT chiefs were approached to analyze which were the training needs coming out of the business. Four codes concerning the challenges faced by L&D, from which arose seven thematic areas.





2.      Training and Skill Development: Upon identifying gaps in skill, organizations could then institute training programs at the workplace that are really geared at plugging those gaps. This will aid with retaining talent and contribute towards enhanced productivity.
3.      Industry-Education Gap: A massive gap between skills taught in colleges versus those required by the industry exists, especially in India. This adversely affects graduates, irrespective of their academic performance.
4.      Learning Needs Analysis: Assessment tools must be put in place to carry out this analysis for technical skills as well as soft skills for the conduct of focused training interventions.
5.      Coaching and Mentoring: Organizations should equip their managers and leaders in areas such as mentoring others, coaching, and giving constructive feedback that creates a nurturing learning environment.
6.      Self-Reflection and Initiative: When an organization encourages its employees to take initiative in their own learning, it helps foster personal development. These self-reflecting programs in turn will help the individual identify own skills.
7.      Manager Development: The treatise stresses the value of managers in the whole development process. They should be trained to grasp the concept of "coach" and spend one-on-one time with employees talking about their development while also ensuring that the environment supports continued learning

The whole perspective should revolve around establishing a structured career development approach, teaching employees to adapt to challenges ahead, and ultimately becoming useful to the society at large.

#### **1.1.2.Competencies needed**

IT leaders and professionals were interviewed to find out which skills their employees needed to develop. Their responses were grouped into 7 codes, leading to eight main themes.



Figure 9: Network diagram of competency needs as design consideration

The diagram above revealed that L&D interventions are able to develop employee competencies as competencies are discussed during discoveries and common competencies are included in design considerations. Some of these competencies needed in IT were identified such as leadership, communication, learning, adaptability, problem-solving, and decision-making.

The respondents have talked about the different training needs and skills development necessary in a workplace. The focus is on customer retention, communication, negotiation, emotional intelligence, and leadership skills. Here's a summary of the key points mentioned.

1. **Training Focus:** Emphasis on keeping customers and bringing in new ones.  
Communication skills are essential for interacting with customers and solving issues. Time management and teamwork are important, especially with diverse backgrounds, making team-building exercises necessary.
2. **Key Skills:** Creative thinking provides a way to offer real value to customers.  
Training aimed at improving performance boosts employee confidence and leadership potential. Emotional intelligence and soft skills help create better working relationships. Managing conflicts is crucial in project management and dealing with team-client dynamics.
3. **Organizational Processes:** Recruitment planning and execution involve using tools to find candidates and running efficient interviews. There is a need for organized onboarding and ongoing training programs focused on specific skills.  
Understanding the organizational flow and needed documents during hiring is also important.
4. **Learning and Development:** Employees prefer blended learning models that mix online and in-person training. Programs concentrate on communication, negotiation, leadership, and change management, which are essential for personal and organizational growth. Training offers networking chances to improve team bonding and relationships.
5. **Communication and Behavior:** Effective communication is important at all levels and functions, including understanding different communication styles. Active listening, body language, and clear speaking are key parts of effective

- communication. Introverted employees may struggle to express themselves, but targeted training can help.
6. **Employee Engagement:** Strategies are needed to keep employees interested and foster a sense of belonging in the organization. Leaders should empower staff and encourage communication rather than just relying on traditional management.
  7. **Feedback and Assessment:** It's necessary to measure how well training programs work and modify them based on feedback and what the organization needs. Continuous skill assessments against job requirements ensure they meet market demands.
  8. **Importance of Adaptability:** As organizations change, the training agenda must include new skills like mindfulness and innovation in employee development.

In conclusion, a combined approach focusing on communication, leadership, and teamwork skills, backed by targeted training programs and efforts to build capacity, is vital for staying competitive in a customer-focused environment.

## **1.2. Need assessment step**

The network diagram below shows some of the learning needs that are taken into consideration by L&D professionals to ensure that the training is impactful. These include understanding of role requirements, performance reviews, employee views, manager inputs, appraisals, job description, and competency dictionary. Task analysis and data analysis are a part of the needs assessment step.

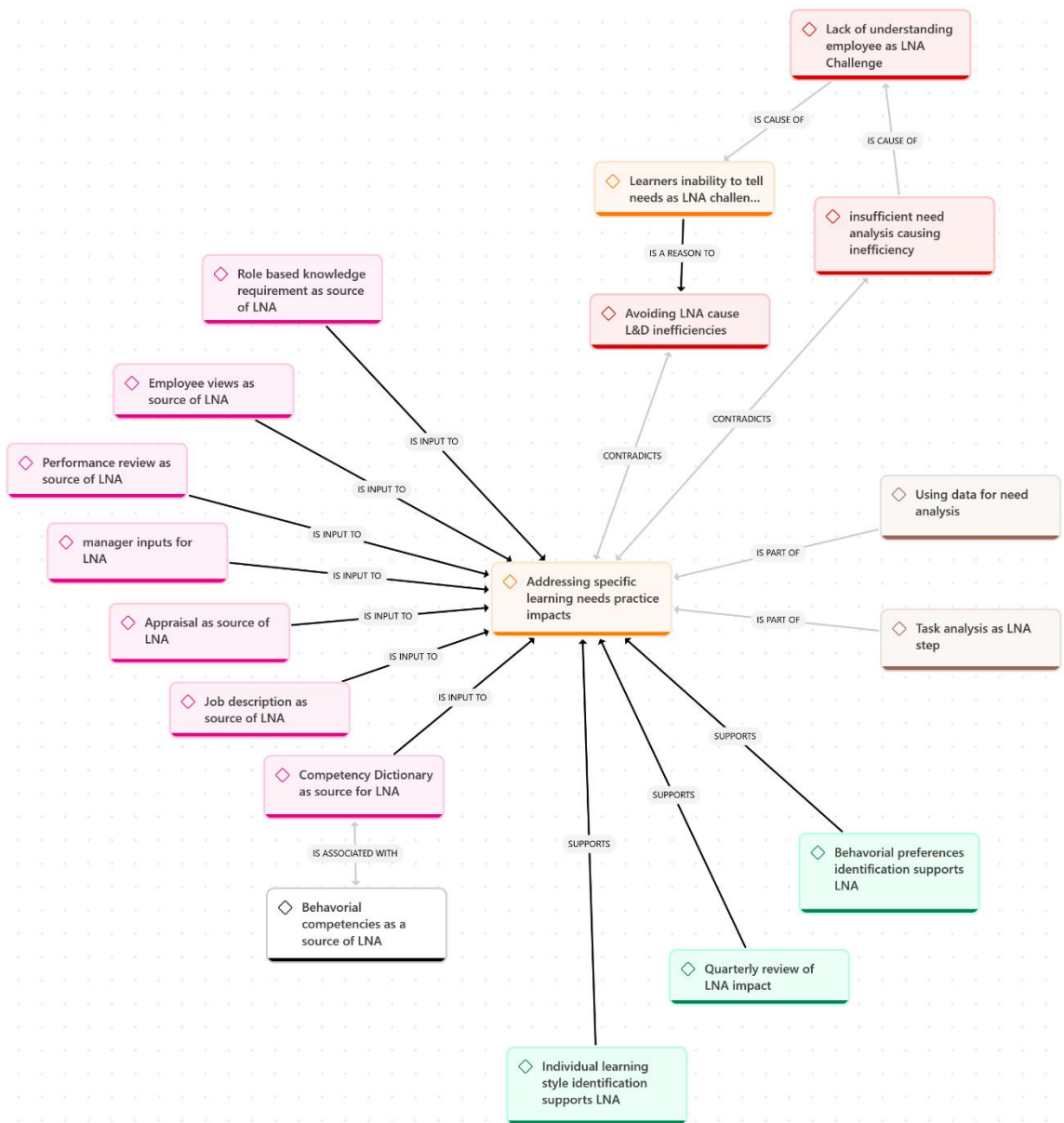


Figure 10: Learning Needs Assessment Network Diagram

L&D professionals were interviewed to understand what steps they follow for learning needs assessment and the coding of their responses generated 16 codes from which eight key themes were identified.

In a learning needs assessment (LNA), it's essential to involve multiple stakeholders, including learners, supervisors, team members, and management. This collaborative

approach enables a comprehensive understanding of skill gaps and learning requirements within the organization. Here's a summarized process for conducting an effective LNA:

1. **Data Collection:** Gather data through various methods such as employee interviews, supervisor feedback, performance reviews, and regular assessments. Utilize a competence dictionary and defined position descriptions to streamline this process.
2. **Analysis of Skills:** Analyze the collected data to identify common learning needs across different roles. This analysis should include both technical skills and behavioral competencies, utilizing frameworks like the Kirkpatrick Model to evaluate training effectiveness.
3. **Engagement of Stakeholders:** Involve all relevant stakeholders in the assessment process. This includes not only managers but also peers and team members who can provide insights into the current performance and areas for improvement.
4. **Identifying Specific Training Needs:** Based on the performance management system (PMS) and feedback, pinpoint specific areas where employees need development. This should be a two-way communication where employees can also express their own training needs.
5. **Implementation of Training Programs:** Once the needs are identified, develop tailored training programs that align with both individual growth and organizational goals. This includes onboarding for new hires and continuous development for existing employees.
6. **Competency-Based Training:** Design training that focuses on competencies relevant to each role, ensuring that it addresses the specific requirements of the job and prepares employees for their tasks effectively.

7. Ongoing Evaluation and Feedback: Continuously evaluate the impact of training programs through pre-assessments and post-assessments. Collect feedback regularly to ensure training remains relevant and effective.
8. Documentation and Reporting: Maintain thorough documentation of all processes, findings, and outcomes. This is vital for tracking progress and making informed decisions for future training initiatives.

By following these steps, organizations can enhance their training needs assessment process, ultimately leading to a more skilled and competent workforce.

#### **1.2.1. Employee needs / expectations**

Respondents were asked about the competency development needs of employees and the interview analysis revealed 33 codes that brought out nine key themes on employee development needs.

Based on the extensive training report you've provided, it seems that the focus is on enhancing communication skills, crisis management, and behavioral competencies among employees. Here are some suggestions for where and how you can direct this information and training initiatives

1. Corporate Training Programs: Consider engaging corporate training firms that specialize in communication and leadership development. Such organizations can provide tailored workshops and seminars that address the specific training needs highlighted in your report, such as conflict management, crisis communication, and effective presentation skills
2. Internal Learning and Development Teams: If your organization has an internal L&D department, presenting this report to them could help in

structuring training programs that align with departmental needs. They can help design workshops that cover both technical and soft skills, focusing on the essential competencies needed for career advancement.

3. **Mentorship Programs:** Implementing a mentorship program within the company could offer employees the opportunity to learn from senior staff. As mentioned in the report, creating a mentor pool where experienced professionals help guide newer employees can be invaluable in developing their communication and technical skills.
4. **Cross-Functional Training:** As emphasized in the document, fostering a collaborative environment where teams can engage in cross-training will enhance overall skill sets. You may want to encourage team-building exercises that involve members from different departments to understand and appreciate various functions and how they interconnect.
5. **Regular Feedback Mechanisms:** Setting up a structured feedback process can allow employees to receive continuous input on their communication skills and overall performance. This could involve peer reviews or managers providing direct feedback after presentations and meetings.
6. **Industry-Specific Training:** Tailoring programs to industry specifics (like improving customer-centric communication in tech development teams) can help address gaps in current employee knowledge bases, particularly for those transitioning to managerial roles.
7. **Executive Coaching:** For those in leadership positions, introducing one-on-one coaching sessions focused on advanced communication strategies, emotional intelligence, and conflict resolution can bolster leadership capabilities.
8. **E-Learning Modules:** Implementing e-learning platforms can cater to specific training needs, particularly in technical skills. This would allow employees the flexibility to learn at their own pace, especially regarding essential software and tools related to their work.



9. Workshops on Behavioural Skills: Organising workshops that cover behavioural competencies can help in cultivating soft skills across the board, thus addressing common shortcomings highlighted in the report about newer entrants in the workforce.

IT professionals were asked what they expected from the organisations to enhance their learning and development. The coding of the interview data obtained 10 codes, from which the analysis revealed eight themes.

The text discusses the evolution of workplace training and employee expectations, highlighting a shift toward blended learning models that combine virtual and in-person experiences. Employees currently value career development and personal growth over mere financial incentives, seeking opportunities to enhance their competencies and leadership skills. Key points include:

1. Blended Learning Preference: Employees prefer a mix of online and in-person training, as personal interactions still bring joy and motivation to the learning experience.
2. Focus on Career Development: Many workers are looking for intellectual growth and organizational awareness, prioritizing roles that align with their career aspirations, such as moving from backend tasks to sales.
3. Impact of Training on Retention: Effective training not only keeps employees engaged and up-to-date but also helps enhance personal confidence and presentation skills.
4. Mentorship Importance: Employing supportive mentorship can guide employees in their professional journey. Employees benefit from having mentors assigned to help them navigate their corporate paths.

5. **Need for Application of Learning:** Training requires practical application to be effective; simply attending sessions is insufficient. Continuous support and feedback from managers are crucial for embedding learned skills into daily work.
6. **Work Environment:** Employees appreciate a work culture that offers flexibility, reduced pressure, and opportunities for travel, indicating a desire for a work-life balance.
7. **Social Influences:** The portrayal of success on social media can affect employee expectations, influencing them to seek fulfilling roles instead of just stable ones.
8. **Learning & Development (L&D):** Continuous L&D is essential for employee engagement and effective utilization of skills. Companies need to create a robust learning ecosystem that combines various training modalities to meet employee needs.

In conclusion, a supportive environment promoting growth, learning, and flexibility remains essential for employee satisfaction and retention, reflecting a significant shift in what workers prioritize in their careers today.

### 1.3. Training design step

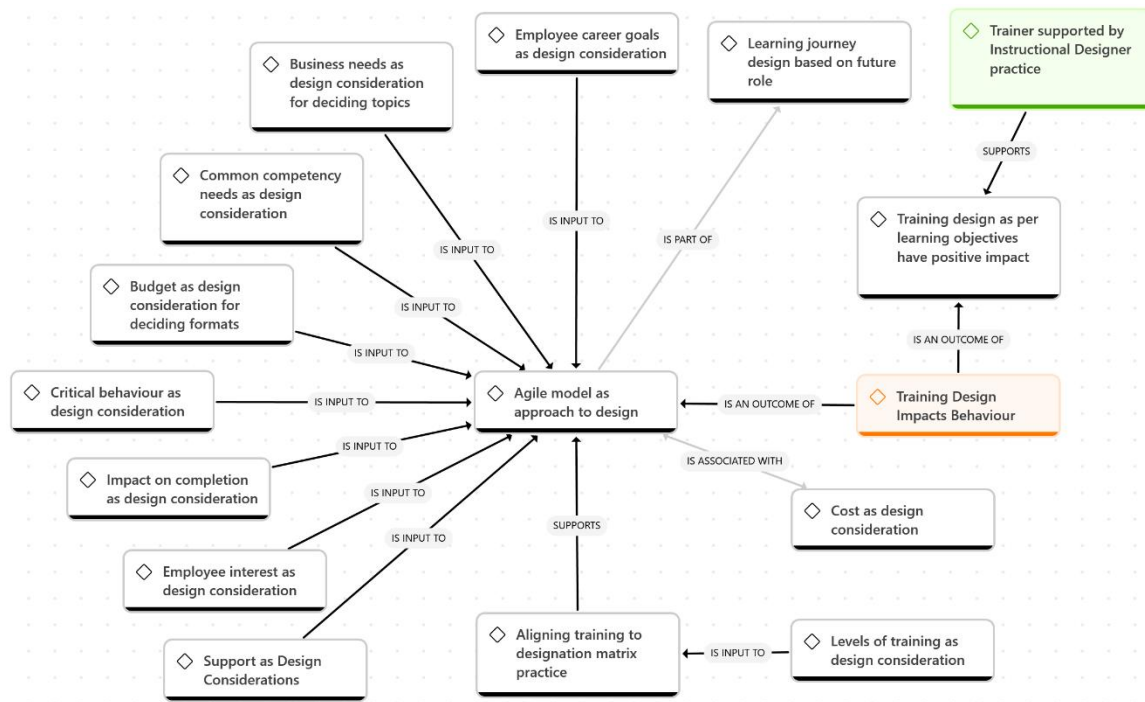


Figure 11: Training Design Network Diagram

The diagram above reveals the considerations in designing when following Agile approach to designing a learning intervention. These include support, employee interest, impact on completion, critical behaviour, budget, common competency needs, employee needs, employee career goals, and levels of training.

L&D professionals were asked what they do as a part of training design which resulted in the extraction of 17 codes that generated ten themes from thematic analysis. The discussion centres around the necessity and impact of training programs within organisations, especially in the context of rapidly evolving technology and methodologies. Here are the key points summarised:

1. **Budget Considerations:** It's crucial to assess whether there is sufficient budget for training programs, considering the required trainers, infrastructure, and content formats.

2. **Importance of Training:** Training is vital due to the fast-paced evolution of technology, preventing employees from becoming obsolete. It is often viewed as a perk for employees, enhancing retention and satisfaction.
3. **Training Needs Analysis (TNA):** Identifying training needs requires understanding the business goals and challenges. Engaging with employees to discuss their needs and experiences can help tailor the training.
4. **Training Models:** The ADDIE model is frequently used for designing training programs, while the Kirkpatrick model is popular for evaluating impact. Agile methodologies are becoming essential as training programs transition to iterative and responsive designs.
5. **Access to Learning Platforms:** Organisations utilise platforms like Udemy and Pluralsight to facilitate learning, catering to various priority levels and business impacts.
6. **Behavioural Assessment:** Understanding how training influences behaviour is important for measuring the effectiveness of programs. Observational methods may provide more accurate assessments than simple surveys.
7. **Employee Engagement:** The majority of participants reportedly engage in training programs, which can lead to behavioural modifications.
8. **Goal Alignment:** Training programs should align with organizational themes, goals, and individual career aspirations, helping in career growth and leadership development.
9. **Retention Strategies:** Companies need to gather feedback from former employees to understand why they left and improve retention strategies.
10. **Long-term Planning:** Training needs should be identified well in advance to prepare for upcoming business objectives and skill requirements, ensuring that learning solutions are relevant and timely.

The overall narrative emphasises the strategic role of training and development in enhancing organisational performance and employee growth, adapting to changing business environments and technological advancements.

#### 1.4. Training delivery step

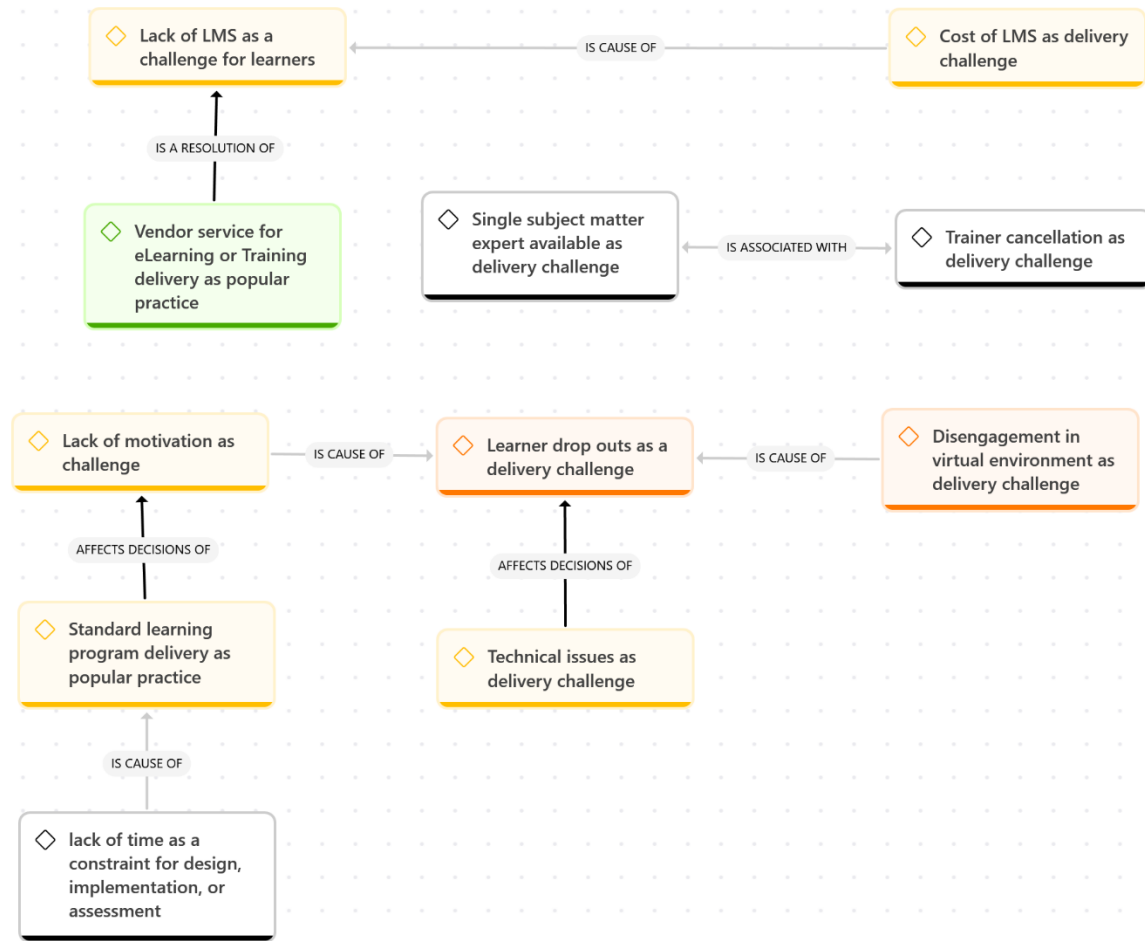


Figure 12: Training Delivery Network Diagram

The network diagram above explores the codes identified under the theme of training delivery revealing that cost is the reason for the lack of LMS in SMEs and eLearning service from a third party vendor can help fill this gap. Also, it shows that the drop of learners could be caused by lack of motivation and disengagement in the virtual environment, indirectly influenced by time constraints leading to standard deliveries that are not motivating and technical issues affecting learners during sessions.

L&D professionals were asked about their roles in delivering training in learning and development. The findings showed that the L&D manager usually supervises one or two staff members who take care of daily tasks like preparing training materials, emailing documents, and managing content on platforms like SharePoint. In smaller organizations, a Learning Management System (LMS) might not be practical due to its complexity and cost, so training often occurs on a one-on-one basis.

In larger organizations, particularly those with 500 or more employees, LMS administrators are crucial for managing e-learning content and tracking participation and training data. Their responsibilities include generating reports that evaluate training effectiveness.

To improve learning outcomes, organizations should either hire a specialized team for learning design or work with external experts. Although the initial costs for learning design and training may seem high, the cost of insufficient training can be much higher.

Many employees still favor classroom training because of its interactive nature and the relationships formed during face-to-face interactions, like networking over coffee or lunch. As a result, a blended approach that combines online self-paced modules with in-person sessions is often the most effective training strategy.

### **1.5. Reinforcement step**

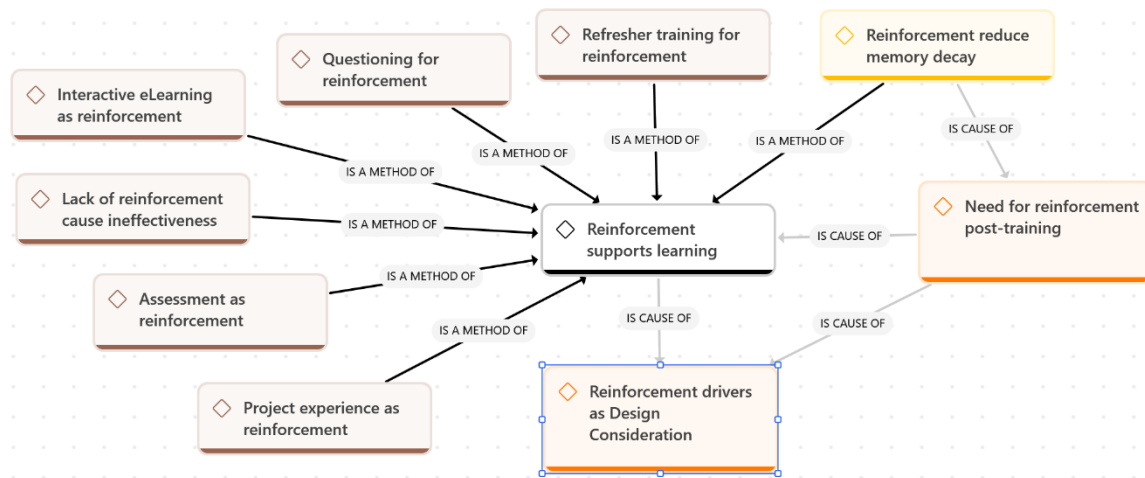


Figure 13: Reinforcement Network Diagram

The network diagram obtained from Atlas.ti above shows some reinforcement methods popular with companies such as project work, assessments, eLearning, refresher training, and questioning.

Retraining occurs after three months, with on-the-job coaching from a supervisor who acts as an auditor and facilitator. This process is necessary because 80% of learning is forgotten within a week, and only 10% sticks around after a month. Without continuous reinforcement, reviewing material a few months later is not helpful. Training can't be effective as a one-time event; it needs to be an ongoing process that includes reinforcement.

During reinforcement, close support is essential. Learners need opportunities to apply the knowledge gained through project experiences. Reinforcements consist of assessments, celebrating responses from learners, pre-work, distributing handouts, and assigning tasks.

Feedback is gathered after each session following the Agile methodology for better learning and development. Elearning helps learners understand how to improve their behavior, and interactive activities on previously covered topics can

engage them during the reinforcement phase. Many companies operate with tight budgets for this engagement, so they often rely on open eLearning platforms offered by partners. Discussions during training can lead to self-realization, which reinforces learning and revision.

## **1.6. Evaluation step**

L&D professionals were asked about their evaluation practices after training. Their responses revealed 14 codes that were analyzed, leading to eight main themes:

1. Current Situation: Key performance indicators to measure the effectiveness of learning and development (L&D) efforts include ROI, promotion rates of brand managers from field officers, team productivity, employee turnover rates, and overall business quality.
2. Skills and Approaches: The focus is on technical and functional skills, with domain knowledge as the base, alongside an understanding of how technology can solve business problems. Due to budget limitations, training is optimized by prioritizing topics that can significantly impact the business and making effective use of existing eLearning partners and licenses.
3. Evaluation Mechanisms: After training, input from stakeholders is gathered to ensure that training outcomes match the business results. The Behavioral Anchored Rating Scale (BARS) method assesses performance at three levels: novice, average, and expert. Post-training behavior and performance improvements are crucial for evaluating impact, alongside feedback from employees and customers.



4. Training Effectiveness: The Kirkpatrick model is used to assess the impact of training, with levels that include reaction, learning, behavior, and results.

Feedback mechanisms measure participant satisfaction and track behavioral progress. Post-assessments evaluate knowledge retention. Effective training is marked by visible behavioral changes, better employee retention, and improved performance.

5. Continuous Improvement: Ongoing discussions and qualitative feedback from managers after training guide necessary changes to training modules and their delivery. Indicators of implementation success are defined, and a steering committee conducts quarterly reviews and makes adjustments based on data and progress.

6. Technical Training Considerations: To improve retention and ROI for technical training, evaluations through quizzes and real-world project assessments help reinforce learning. Encouraging managers to maintain continuous feedback and open communication with their teams supports ongoing performance development.

7. Stakeholder Engagement: Identifying important stakeholders across the organization is crucial. Their insights help define training needs and ensure that outputs align with business expectations. Building strong relationships and effective communication between L&D and business units boosts the quality and relevance of training programs.

8. Budget Management: With limited funds, training methods must adjust to make the most of available resources, often transitioning from larger off-site sessions to in-house formats or digital distributions when needed.

## **2. Practices**

### **2.1. Popular practices**

IT Leaders and L&D professionals were asked which practices were most popular in the industry in the arena of learning and development. The coding of the interview data obtained 12 codes from which the analysis revealed 12 themes.

The text outlines the challenges and strategies related to Learning and Development (L&D) in a business context. Below is a summarized version of the key points:

1. **Understanding Business Needs:** Before implementing training programs, it's crucial to understand the specific challenges and problem areas that businesses face. This requires gathering insights from key stakeholders about their interests and priorities.
2. **Training Budget Constraints:** Many organizations have limited budgets for training. When external options are not financially feasible, companies may resort to in-house training or use available resources such as PDFs or e-learning modules.
3. **Reactive vs. Proactive Training:** Training needs can be reactive (e.g., clients requiring new technology) or proactive (e.g., identifying skill gaps). Organizations need to assess and prioritize training based on business impact.
4. **Alignment of Individual Aspirations with Business Goals:** Training programs should align individual career aspirations with the strategic goals of the business. Leadership input can guide this alignment.
5. **Innovative Training Approaches:** On-the-job training is emphasized as the most effective learning method. In-person training may be rare, and organizations benefit from allowing flexibility in learning environments.
6. **Learning Technology Integration:** Rapid technological changes create a need for continuous learning. Utilizing e-learning platforms and leveraging vendor expertise are key strategies for providing ongoing training.

7. Importance of Skill Development: Balancing technical skill training with soft skills is necessary to equip employees effectively. Different levels of employees may require different training focuses as they progress in their careers.
8. Customization of Learning Experiences: Organizations should ensure that trainings are tailored to meet specific project requirements and that assessments are in place to evaluate the effectiveness of training.
9. Engagement of Subject Matter Experts: Collaborating with subject matter experts and utilizing their knowledge is essential to structure impactful training programs.
10. Collaborative Learning Environments: With large teams, standardized training practices and a focus on objective-driven learning can enhance the overall skill set of the workforce.
11. Utilization of E-Learning Resources: Leveraging e-learning platforms like Pluralsight and Udemy can provide cost-effective training solutions for skill development.
12. Outsourcing When Necessary: For areas lacking internal expertise, outsourcing training to reasonable freelancers or vendors can be a viable option to ensure quality training delivery.

In summary, effective L&D requires a strategic approach that aligns training with business needs, utilizes available resources efficiently, and adapts.

## **2.2. Most impactful Practices**

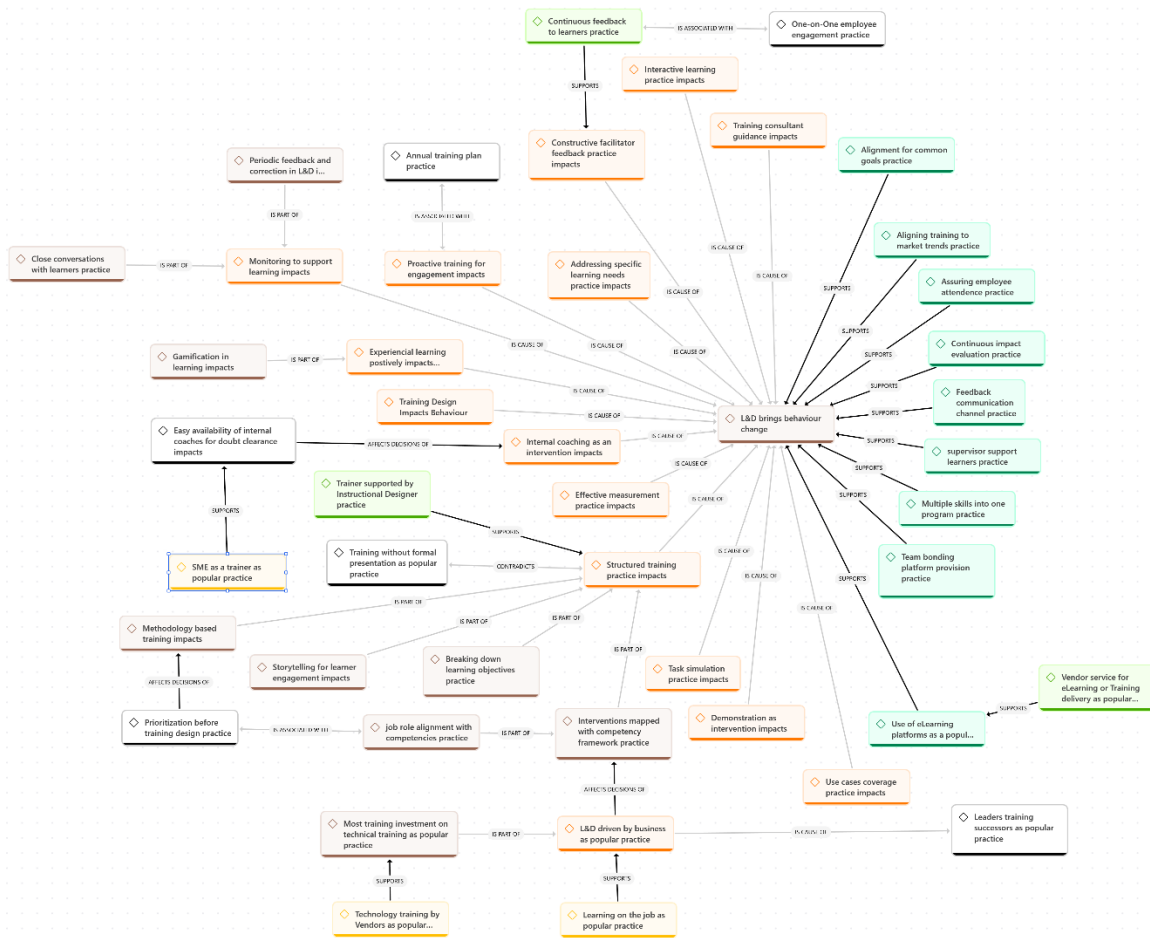


Figure 14: Impactful L&D Practices Network Diagram

The network diagram shows that several different L&D practices are used that can create impact through structured learning such as storytelling, methodology based training, competency mapping, and breaking down of learning objectives. Structured learning also creates a behaviour change created through coaching, experiential learning, proactive training, monitoring, addressing specific learner needs, interactive learning and consultants guidance, also supported by alignment with business goals and industry trends, supervisor support, feedback, team

bonding, impact evaluation, and combining of multiple skills into a single intervention.

The respondents were asked which L&D practices did they find impactful in terms of creating influence on employee behavior and those resulting into the success of the organization. The qualitative analysis of the interview generated 80 codes from which emerged ten major themes.

The text discusses the importance of employee growth and training within an organization, emphasizing that when employees feel valued and supported, it contributes to overall retention and company success. Training programs should be aligned with the company's goals, focusing on continuous learning and adapting to industry changes. Here are the key points summarized:

1. Employee Growth and Company Success: There is mutual benefit in fostering employee growth, as it directly influences the company's growth and retention.
2. Training Impact: Effective training maintains employee engagement and builds skills such as personal presentation and confidence, which contribute to both individual and organizational growth.
3. Proactive Career Development: Organizations should have clear career paths and competency frameworks to help employees understand what is expected at each level and what growth opportunities are available.
4. Tailored Training Approaches: Training should be customized based on individual roles, job requirements, and market trends. Both hands-on experience and theoretical knowledge are critical for effectiveness.

5. **Training Evaluation Methods:** Training success should be measured through various metrics, including learner self-assessment, performance changes, and overall business impact. Continuous feedback is essential for improvement.
6. **Manager-Employee Conversations:** Regular dialogues between managers and team members about career aspirations and development plans foster engagement and retention.
7. **Learning Ecosystem:** A supportive learning culture, combining formal training, mentorship, and available resources, is fundamental for employee development.
8. **Experiential Learning:** Practical, hands-on learning methods, such as role plays and case studies, have a more significant impact compared to traditional lecture-based approaches.
9. **Technology in Training:** Leveraging digital tools and e-learning platforms can enhance access to training resources and align learning with business objectives.
10. **Understanding Organizational Goals:** It's crucial to align training programs with the company's strategic goals and industry demands, ensuring that employees see the value in their development.

In summary, a well-structured Learning and Development (L&D) program aligned with an organization's goals fosters a culture of growth, enhances employee satisfaction, and improves overall business performance.

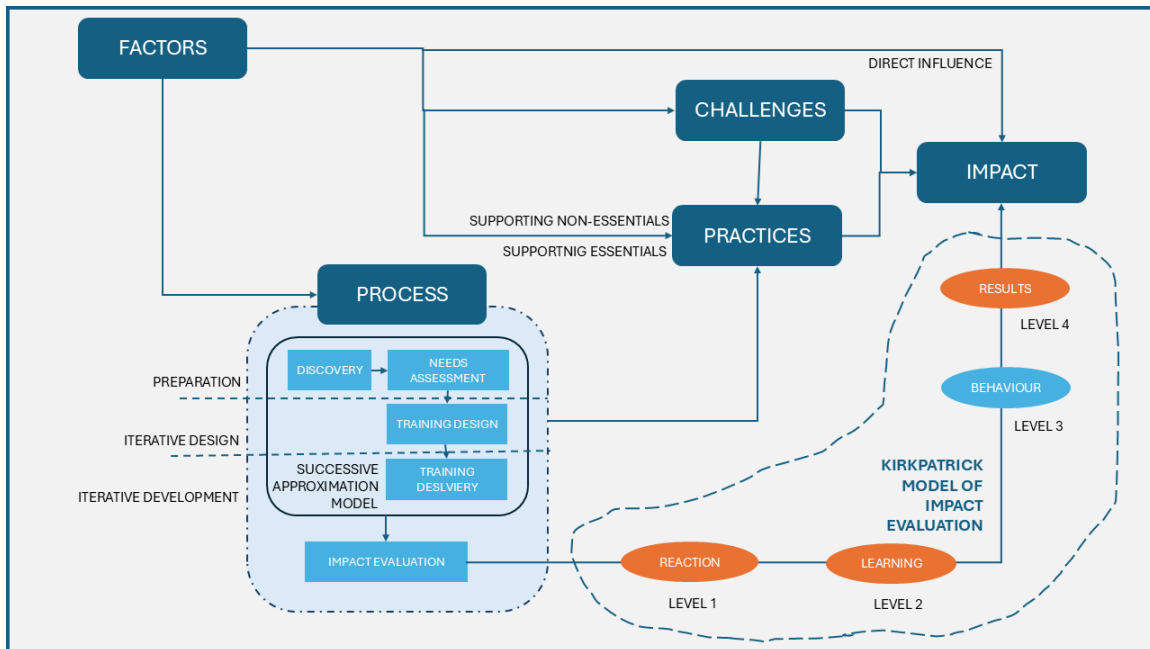
## CHAPTER V: DISCUSSION

### **5.1 DISCUSSION OF RESULTS**

The researcher conducted a thematic analysis on data from observations, interviews, and group discussions with L&D professionals, IT leaders, and IT employees. They used Atlas.ti to code the data. Similar codes were grouped together to identify 295 basic themes. The researcher then organized these into 21 themes, which were further combined into 5 global themes.

The findings show that the Learning & Development Model in the IT industry has five key dimensions: factors, challenges, impact, process, and practices. The challenges dimension outlined various challenges and their solutions.

Impact factors included those that have a direct influence, essential support factors, and non-essential support factors. The impact dimension examined both direct and indirect effects. The L&D process dimension identified major steps such as discovery, needs assessment, training design, delivery, and evaluation of impact. The practices dimension highlighted popular and effective practices.



## 5.2 DOES LEARNING AND DEVELOPMENT INTERVENTION IMPACT EMPLOYEE BEHAVIOR?

Earlier research discussed in the literature review has shown that employee retention depends on an employee's choice to stay with an organization. This decision is reflected in their behavior, including higher performance, collaboration, advocacy, discretionary effort, and lower turnover intentions. Other studies have looked at employee retention objectively, seeking to understand whether retention rates have improved. However, these studies have not delved deeply into the specific behaviors that lead to higher employee retention. The current research explores these behaviors and frames them within the context of employee retention as a behavioral construct. Accordingly, this research views employee retention as a behavioral aspect arising from



employees' decisions to remain in an organization. It primarily examines two aspects of employee behavior: retention and performance.

The literature review confirmed that learning and development positively affects both employee retention and performance. However, previous studies did not explore the behaviors employees display after participating in training or learning experiences. To address this, the researcher conducted case studies in two organizations. In one organization, data was collected from 60 out of 70 employees working in an IT firm in Mumbai using an experimental method. Employee behavior was measured for both performance and retention using the Behaviorally Anchored Rating Scale and the Intention to Stay Instrument, respectively. However, the intention to stay scale was discarded because the organization's founder felt it influenced retention decisions. The researcher then focused on measuring changes in performance, particularly using AI as a specific measurement task through the BARS methodology. This left a gap in measuring retention.

Studying retention as a behavioral construct proved useful. The researcher shifted the perspective to understand how learning and development impact retention by conducting participatory interviews with IT leaders, professionals, and Learning & Development experts. They provided their views on the effects of learning and development on employee retention and performance. The discussions highlighted other behavioral aspects influenced by learning and development.

To answer whether learning and development affect employee performance as a behavioral construct, the researcher carried out an experiment. A control group of 30 employees received traditional training, while an experimental group of 30 employees underwent a learning and development intervention that included training and reinforcement through refresher sessions, activities, reading materials, and gamification of learning. The findings showed that more employees in the experimental group exhibited significant behavior changes compared to those in the control group, who only received traditional training. The impact was measured three months after the initial training. Afterward, those in the control group received no reinforcement, while those in the experimental group had access to reading materials, project activities, and gamified learning sessions. The differences were significant, and all employees in the L&D intervention showed behavior changes.

Due to the small sample size from the company chosen for the case study, these findings cannot be generalized to a broader audience, including other IT companies in Mumbai, Maharashtra, India, or worldwide. However, the findings provide a solid basis for further investigation, confirming that L&D can significantly influence employee performance as behavior. From this, the researcher felt confident to implement a full L&D program in another organization to support the findings. The second case study was initiated to revalidate earlier findings and address the shortcomings of the first case study. In the first case study, responses were partially gathered through a self-administered

survey using the Intention to Stay scale, which did not meet expectations. The researcher found that direct observation yielded more authentic insights. Still, this method could lead to bias since employees might perform better while being observed, aware of the research goals.

To avoid this issue, the researcher used covert observation in the second case study, keeping selected employees in the learning cohort unaware of the research. To prevent bias, the researcher concealed the study's purpose from learners and other stakeholders in L&D, including management and trainers. This approach proved effective, revealing genuine insights as management and trainers did not attempt to hide inefficiencies since they were not aware of being observed. The researcher believed this strategy was ethically sound, as the lack of awareness would not impact employee or organizational performance.

Additionally, in the second case study, the researcher ensured all significant steps involved in the L&D process were observed for their impact, utilizing multiple training types. An actual L&D intervention in an organization typically includes various training programs aimed at developing employee skills in different areas, featuring diverse training delivery methods. To prepare for this, the researcher conducted pilot interviews with L&D professionals to gather insights on necessary steps and desirable competencies in small to medium IT companies in India. With this information, the researcher compiled a list of relevant topics for the study. The researcher was fortunate to receive a

consulting and training delivery project from the organization studied at the same time, and management agreed to cover all proposed topics.

This case study helped understand the comprehensive impact of L&D on employee behavior. However, since the observation was covert, it could not be specifically directed toward measuring performance or retention as behavior. The researcher noted that all cohort employees remained with the organization for a year, except for two dropouts. One left for personal reasons related to a serious family health issue, while the other faced technical disruptions that hindered following the training. This second learner attended sessions online, while the others participated in physical sessions.

These observations clearly indicate that inefficiencies in L&D, such as technical issues, can significantly impact employee retention. They also suggest that despite employee satisfaction, attrition can occur for personal reasons. Moreover, the employee who left for personal reasons later contacted the facilitator seeking another chance to return, indicating that the influence of L&D may have a long-term effect on an employee's intention or decision to stay.

Interviews with L&D professionals, IT leaders, and employees from other IT organizations explored both performance and employee retention as behavioral constructs. The interview responses were analyzed using Atlas.ti, a popular qualitative

data analysis software, revealing numerous codes and themes as outlined in the findings section. From these insights, the researcher gathered strong evidence confirming the impact of learning and development on both employee retention and performance.

On one hand, learning boosts an employee's career and increases chances for growth. It positively impacts retention and benefits organizations as well. Therefore, training was seen as crucial for participants in this research. When looking at why employees want to stay with a company, a theme of growth and opportunity stood out. This theme was backed by learning and development efforts, which included not just effective training but also recognizing employees' achievements to support retention. This suggests that showing appreciation for employee participation and performance in a learning and development intervention can positively influence employee retention.

Learning and development efforts also indicate that an organization cares about the growth of its employees. This creates a positive feeling among employees and leads to better retention, as they want to stay longer with such companies. During discussions with learners, many examples showed that employees felt delighted when the company invested in their development. This investment fostered a sense of belonging and created a desire to remain with the organization.

Mentorship programs are another form of support that is often overlooked in traditional training but play a key role in learning and development. The analysis of interview responses revealed that an effective mentorship program can have a direct positive effect on employee retention in IT companies. In fact, organizations viewed a training program as effective if it resulted in behavioral changes and increased employee retention.

### **5.3 WHICH LEARNING AND DEVELOPMENT PRACTICES HAVE AN IMPACT ON EMPLOYEE BEHAVIOR IN AN IT ORGANIZATION?**

#### **Discussion**

Earlier research, as discussed in the literature review, has shown that employee retention is influenced by the decision of an employee to stay in an organization. This decision is reflected in their behaviour, such as higher performance, collaboration, advocacy, discretionary effort, and reduced turnover intention. While other studies have explored employee retention from an objective perspective, seeking explanations on whether the rate of retention has been enhanced, these studies have not delved deeply into the individual aspects of behaviour that lead to higher employee retention.

This research has been able to explore these behavioural aspects and integrate them into the concept of employee retention as a behavioural construct. Thus, this research views employee retention as a behavioural aspect, resulting from employees' display of behaviours, including their decision to stay in an organization. The research primarily covers two aspects of employee behaviour: their retention and performance.

Several learning and development (L&D) practices were found to significantly impact these behaviours:

**Application of Learning:** Hands-on assignments and real-world projects reinforce skills and ensure that employees can apply their knowledge effectively. This practical application of learning has a more significant impact compared to traditional lecture-based approaches.

**Experiential Learning:** Group discussions, case studies, role plays, and practical activities make training more engaging and impactful. These methods encourage active participation and deeper understanding, leading to better retention and performance.

Collaboration with Subject Matter Experts (SMEs): Collaborating with SMEs and utilizing their knowledge is essential to structure impactful training programs. SMEs ensure that the content is relevant and aligned with job roles, enhancing the effectiveness of the training.

Trial Runs and Feedback: Conducting trial runs of the training programs and gathering feedback allows for necessary adjustments before the full rollout. This iterative process helps in refining the training content and delivery methods.

Leveraging E-learning Platforms: Utilizing e-learning platforms like Pluralsight and Udemy provides cost-effective training solutions for skill development. These platforms offer a wide range of courses that can be tailored to meet specific learning needs.

Effective Communication: Ensuring communication about the training program through various channels is crucial for participant engagement. Clear communication helps in setting expectations and encouraging participation.

Outsourcing Training: For areas lacking internal expertise, outsourcing training to reasonable freelancers or vendors can be a viable option to ensure quality training delivery. This approach helps in bringing specialized knowledge and skills to the organization.

Ongoing Dialogue: Encouraging ongoing dialogue to address any real-time issues faced by participants supports continuous improvement and performance development.

Regular discussions and qualitative feedback collection from managers post-training inform necessary adjustments to training modules and their delivery.

These practices were found to be helpful in creating a supportive learning environment that creates a positive impact on employee behaviour, leading to higher retention and improved performance.

#### **5.4 WHAT LEARNING AND DEVELOPMENT MODEL CAN BE RECOMMENDED FOR A POSITIVE INFLUENCE ON EMPLOYEE BEHAVIOR FOR SMALL AND MEDIUM IT ENTERPRISES IN INDIA?**

The analysis showed that the ADDIE model is commonly used for designing and developing L&D programs. L&D professionals often prefer the Kirkpatrick model to evaluate the impact of learning interventions. Organizations also follow an Agile approach, incorporating feedback after each training session as part of an intervention. However, Agile is not seen as a main L&D model; rather, it acts as a supportive system that can improve the effectiveness of L&D programs in IT organizations. These models serve as guidelines, as organizations do not strictly follow the exact steps but adapt them based on their needs to implement L&D procedures.

Through the research, several common steps emerged that many organizations follow for L&D. These steps include discovery, learning needs analysis, training design, training delivery, reinforcement, and evaluation. To understand which practices in each step could positively influence employee behavior, such as increasing retention or improving performance, themes around each step and associated practices were explored.

##### **Discovery**

In this stage, L&D professionals start to grasp the business needs that led to the demand for training. In IT companies, rapid technological changes often create a need for continuous learning. Organizations commonly use e-learning platforms and vendor expertise to address this need.



However, professionals reported a strong desire for a training approach that emphasized building trust, engaging employees, and connecting training to organizational goals. Thalheimer (2020) supported this finding in his paper on factors that support training transfer, highlighting the importance of aligning training programs with an organization's business goals.

Companies should create a strong learning environment that combines different training methods to address employee needs. Small and medium enterprises (SMEs) typically have limited training budgets, so they must focus on training initiatives that relate to business goals while effectively using available resources. Designing programs requires navigating budget constraints and changing work dynamics.

This means L&D or training professionals must identify the specific skills needed for different roles. Training proposals should be straightforward to gain support from management, who are concerned about budget limitations. At the same time, the learning interventions must be practical and feasible to implement within these constraints.

The findings showed that understanding the specific challenges and issues businesses face is crucial. L&D professionals need to gather insights from key stakeholders by asking about their interests and priorities.

## **Learning Needs Analysis:**

The findings highlight several important aspects of learning need analysis (LNA) conducted by learning and development (L&D) departments or professionals in IT organizations. Many learning interventions were ineffective and lacked significant impact because LNA was either neglected or poorly executed. One major issue was that managers often requested training without fully understanding their team's needs or how that training related to business goals. This led to misdirected efforts.

The investigation identified specific skills that employees needed to develop. Key skills that IT companies should focus on include communication, collaboration, problem-solving, negotiation, leadership, time management, teamwork, conflict management, soft skills, emotional intelligence, and change management. These skills are crucial for both employee and organizational growth. Leaders noted that improved communication could positively influence project outcomes. Communication skills are vital for interacting with customers and resolving issues. Effective communication is necessary at all levels and functions, including active listening, body language, and clear expression. L&D professionals pointed out that introverted employees, who may struggle to express themselves, could benefit from targeted learning interventions. Industry leaders emphasized that conflict management skills are essential in project management and help employees navigate team-client dynamics.

Training programs focused on performance could increase employee confidence and leadership potential. Emotional intelligence and soft skills are vital for better organizational dynamics. Programs designed to address these specific skills are essential

for the success of an IT organization. For example, a company could create a workshop or seminar that tackles training needs such as conflict management, crisis communication, and effective presentation skills.

These common topics mentioned by respondents were included in the learning interventions designed by the researcher as part of the covert study.

Some aspects of this step that could impact employee behavior are important to consider. While technical training needs can be addressed through e-learning platforms, the same does not hold true for behavioral skills like communication, which require more face-to-face and classroom interactions. Moreover, effective training should go beyond theoretical discussion and include practical activities to engage employees and meet their learning needs.

While these were common requirements for effective learning interventions, organizations needed to gather input from multiple stakeholders to understand employee training needs and improve performance or retention. Feedback from former employees about their reasons for leaving could help companies refine their retention strategies.

However, having the right elements in place for learning does not guarantee impact unless employees are open to learning, which is crucial for achieving effective outcomes. While it seems that this responsibility lies with employees, it also falls on facilitators to spark interest in learners. The findings indicate that employees are more likely to share their needs if they trust the trainer or consultant.

Management often views LNA as a formality, which can lead to ineffective training initiatives. They may not fully recognize the value of a thorough needs analysis before launching training programs and might skip this step. Avoiding LNA can have negative effects, as the training may not be effective.

The research emphasizes that companies should treat LNA as a vital step in L&D. LNA should involve input from various sources, including employee performance data, feedback from previous training, insights from leaders, HR professionals, feedback from department heads, and employee input on challenges. Collecting insights from multiple stakeholders can help clarify training needs and align outputs with business expectations.

Using this information, L&D professionals can identify skill gaps that learning interventions should address. Professionals gather this data through methods such as surveys, focus groups, supervisor feedback, performance reviews, or interviews. According to the findings, a performance management system and feedback together can pinpoint specific areas where employees require development. Engaging with employees about their needs and experiences can further support the process, as LNA must consider both business and employee goals and challenges. However, employees may have cognitive biases when sharing their problems or needs, which could complicate the LNA process.

During LNA, L&D professionals must also consider the need for additional support from supervisors, managers, team members, and upper management. These individuals can provide insights into current performance and areas for improvement. Some companies have used assessments for technical and soft skills to identify skill gaps.

L&D professionals suggested creating a competency dictionary with defined position descriptions as an effective approach for LNA. The collected data could be analyzed to identify common learning needs across various roles, useful for creating these descriptions.

Establishing clear and measurable learning objectives based on identified needs is crucial. Subject matter experts can help with content development and ensure its relevance to job roles. After identifying needs, developing tailored training programs that support both individual growth and organizational goals is necessary.

Structuring training programs to meet departmental needs is essential. Workshops should include both technical and soft skills, focusing on the key competencies required for career advancement. Training needs should be identified well in advance to align with upcoming business objectives and skill requirements, ensuring that learning solutions are relevant and timely.

While we've discussed common competencies and L&D requirements, it is important to consider what employees believe are their needs and expectations from companies for their learning and development. The findings show that employees seek intellectual growth and organizational awareness. They value programs designed to help them better align with their roles and support their career aspirations. From the employees' perspective, effective training is engaging, keeps them informed, and helps enhance their confidence and presentation skills. They also expect a continuous learning experience.

## **Training Design**

The research highlighted that the ADDIE model is the most popular learning and development (L&D) model used by IT companies for designing training programs. However, as training programs move towards more flexible and responsive designs, Agile methods are becoming increasingly important. This change allows for greater flexibility in the training process.

The analysis pointed out several key challenges and factors to consider during the design phase of L&D initiatives. A major challenge is integrating e-learning platforms. These platforms are essential for giving learners insights on technologies and reinforcing behavior improvement through interactive activities on topics they have already covered. However, due to tight budgets, many companies rely on open e-learning platforms offered by partners rather than investing in their own learning management systems. Given the limitations with subject matter experts (SMEs), using open e-learning platforms can be useful. However, without guidance from a supervisor or expert, employees may not meet business needs through these programs.

Another important finding is the value of self-discovery and regular revisions. Conversations during training sessions can spark self-discovery, which serves as a strong motivator. Additionally, frequently reviewing the material can significantly improve learning outcomes.

During the learning needs analysis (LNA) stage, professionals identify skill gaps, which then provide a basis for designing specialized training programs to address these issues. Creating training that targets the specific competencies relevant to each role ensures that it meets job requirements and effectively prepares employees.

As L&D teams move forward in this step, they develop the necessary content for training delivery. SMEs play a key role in directing content development and ensuring its relevance to job roles. Working closely with SMEs helps create effective training programs that support both individual development and organizational objectives. Budget considerations also significantly impact this step, influencing trainer selection, infrastructure needs, and content formats. When external options are not financially reasonable, companies may turn to in-house training or utilize available resources like PDFs or e-learning modules.

### **Training Delivery**

Training delivery in IT organizations is managed in three main ways: training using internal resources, outsourcing training, and utilizing e-learning systems through their own LMS or a vendor's LMS to deliver learning content. For areas lacking internal expertise, outsourcing training to qualified freelancers or vendors can be a good option for ensuring quality delivery. However, for this to be effective, regular discussions and qualitative feedback from managers after training are necessary. These can help identify gaps and adjust training modules for better delivery.

When training involves internal SMEs, L&D managers typically oversee one or two subordinates who handle daily tasks, such as preparing training materials, emailing documents, and managing content on platforms like SharePoint.

For smaller organizations, a Learning Management System (LMS) may not be practical due to complexity and cost, so training is often conducted on a one-to-one basis. To improve learning outcomes, it's important for organizations to either hire a specialized team in learning design or collaborate with external experts. Although initial costs for learning design and training can seem high, the cost of not providing sufficient training can be much greater.

Many employees still prefer classroom training because of its interactive nature and the relationships formed through face-to-face interactions, such as networking over coffee or lunch. Therefore, a blended approach that combines online self-paced modules with in-person sessions is often the most effective strategy for training.

## **Reinforcement**

A good L&D program should go beyond just one training event. It needs a clear follow-up process and extra learning tools, called reinforcements. Studies show that reinforcement is very effective in learning and development (L&D). Research indicates that 80% of what is learned is forgotten within a week, and only 10% sticks around after a month. To prevent this memory loss, we can use reinforcements. These reinforcements set L&D apart from traditional training



programs, which are typically one-time events. In contrast, L&D interventions continuously add reinforcements to training sessions.

The reinforcement process can involve assessments, refresher sessions, celebrating learner responses, pre-work, handing out materials, checking progress on assignments, and other reinforcements like tasks, sharing success stories, guidance and mentorship from leaders, experiential learning through case studies, and practical activities. Interactive training methods like gamification and simulations can engage learners well.

Applying what is learned through hands-on assignments and real-world projects is key to reinforcing skills. Experiential learning methods, such as group discussions, case studies, role plays, and practical activities, make training more engaging and effective compared to old-style lectures.

To make learning interventions effective, close support from management during the reinforcement phase is important. Managers can provide chances to apply the knowledge and skills gained in projects. Leaders are vital for reinforcing the use of new skills at work since they can assign relevant projects to employees after training sessions. Using employee networks to share knowledge, having regular conversations between managers and team members about career goals, and on-the-job coaching by supervisors are some high-impact reinforcements that can greatly benefit employee development.

## **Impact Evaluation**

The goal of impact evaluation is to determine how learning affects employees. Assessments are common methods for checking how much participants remember after training. However, according to the Kirkpatrick model, which is widely used by IT companies to measure training effectiveness, the impact goes beyond just memory. It also

involves applying learning on the job, changing behavior, and achieving business results. The literature indicates that the Kirkpatrick model evaluates training effectiveness on four levels: reaction, learning, behavior, and results. This approach is also seen in large IT organizations.

Evaluations of skill application can use quizzes and assessments based on real-world projects. These methods reinforce learning and help participants apply their knowledge effectively. Encouraging managers to maintain continuous feedback and open conversations with team members also aids in the evaluation process. Certain specific metrics help assess performance improvements following training.

Understanding how training impacts behavior is crucial for measuring program effectiveness. The most common method used by L&D professionals to measure behavioral change was the Behavioral Anchored Rating Scale (BARS), which the researcher also used in this study. Comparing behavior before and after training can show improvements in performance. However, this method is most effective when observational techniques are used instead of surveys. This approach allows for thorough documentation of findings and outcomes, making it easier to track progress and make informed decisions for future training. Still, this method can be very time-consuming.

To assess business impact, stakeholder feedback can help evaluate whether training outcomes align with business results. This evaluation ensures that training programs are effective and relevant to the business.

Management can identify success indicators and conduct quarterly reviews to adjust interventions based on progress data.

A common practice is to use Key Performance Indicators (KPIs) to measure the effectiveness of L&D initiatives. These include ROI, promotion rates of brand managers from field officers, team productivity, employee turnover rates, and overall business quality. Training and evaluations can also be customized for specific project needs, assessing whether learners can meet project requirements after the learning intervention.

From this discussion, we can conclude that a learning intervention is effective if it leads to observable behavioral changes, improved employee retention, and enhanced performance. Although evaluation is often seen as the final step in L&D, it is most effective when treated as a continuous process. Regular discussions and qualitative feedback from managers after training facilitate necessary adjustments to training modules and their delivery, improving every stage of L&D. Factors causing inefficiencies are identified and addressed through pre-assessments and post-assessments, ensuring that training stays relevant and effective.

## CHAPTER VI: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

### **6.1 SUMMARY**

This study looked into the different aspects of employee behavior, focusing on its key components: actions, attitudes, and performance, along with the concept of employee retention. Performance was viewed as a measure of employees' productivity, teamwork, and adaptability, influenced by company culture, motivation, and leadership. Similarly, the choice to remain with an organization was examined through behavioral factors like job satisfaction, trust, and alignment with company values.

Key findings highlight the connection between performance and retention. They stress the importance of a supportive work environment, opportunities for growth, and effective leadership in encouraging positive employee behaviors. This research has clarified the behavioral basis of organizational success, offering a clear understanding of employee dynamics.

### **6.2 IMPLICATIONS**

The study's findings have important implications for workplace practices and management strategies.

For Management: Leaders should focus on building an engaging and inclusive work culture. This motivates employees and meets their needs. Recognizing and rewarding employees' contributions can build loyalty and improve performance.

For Human Resources: Establishing structured training programs, providing career development opportunities, and encouraging work-life balance can help keep employees.

For Organizations: The insights highlight how crucial it is to match organizational policies with employee expectations for long-term success. Strategies aimed at retention, like open communication and building trust, should be prioritized.

By addressing these points, organizations can create environments that boost employee satisfaction and lead to lasting competitive advantage.

### **6.3 RECOMMENDATIONS FOR FUTURE RESEARCH**

While this study offers important insights into employee behavior, more research is needed to deepen our understanding.

Exploration of Demographics: Looking into generational differences and their effects on performance and retention can help develop targeted strategies for managing the workforce.

Remote Work Dynamics: Studying how virtual work environments affect employee behavior and retention in the post-pandemic period can provide fresh perspectives.

Cross-Cultural Studies: Researching behavior across different cultural settings can highlight both universal and unique aspects of employee behavior.

Technological Influences: Investigating how workplace technologies and automation affect employee actions, attitudes, and decisions to remain may be essential for future studies.

These areas could offer richer and more detailed insights into the changing nature of employee behavior in today's workplace.

#### **6.4 Conclusion**

In conclusion, this study has highlighted the importance of understanding employee behavior as a key part of organizational success. By focusing on performance and retention, it has identified the behavioral factors that affect workplace outcomes. Positive employee behaviors, encouraged by supportive leadership, engaging work environments, and growth opportunities, lead to individual and organizational success.

The findings provide practical uses for managers and HR professionals while also creating chances for future research to deepen our understanding of employee behavior in a changing world. As organizations face new challenges and opportunities, prioritizing employee well-being and engagement will stay crucial for lasting success.

APPENDIX C  
INTERVIEW GUIDE

<p><b>Introduction Key Components</b>  Thank you  Pooja Dubey  Purpose: Academic Research  Confidentiality: No recording of personal data and the collected data to be used only for research purposes  Duration: 30-45 mins  Interview through: Zoom  Consent</p>	<p>Thank you for giving me the time to be a part of this research. This research is a part of my Doctorate where I am trying to understand the impact of L&amp;D on employee behaviour. The data collected from you will remain confidential and will only be used for analysis to achieve this objective. By accepting this invite to connect on zoom and giving this interview, you agree to give me the consent to use your data for the purpose of the research.</p>
<p><b>Key Questions</b></p> <p>For IT leaders  <i>Company needs</i>  <i>Challenges</i>  <i>Areas of Improvement</i>  <i>Key Concerns</i>  <i>Training experience</i>  <i>Learning interest</i>  <i>L&amp;D exposure</i>  <i>Challenges in adoption</i>  <i>Impact of L&amp;D</i></p> <p>For Employees  <i>Challenges at work</i>  <i>Behaviorial challenges with others</i>  <i>Areas of improvement</i>  <i>Key concerns</i>  <i>Training experience</i>  <i>Training outcome</i>  <i>Learning interest</i>  <i>L&amp;D</i>  <i>Impact</i>  <i>About SMEs</i></p>	<p><b>For Employees</b></p> <ol style="list-style-type: none"> <li>1. What are the challenges you face at work?</li> <li>2. Do you have any behavioral challenges with others?</li> <li>3. What could be done better with training?</li> <li>4. What are your key concerns with external parties at work?</li> <li>5. What type of training programs have you attended?</li> <li>6. How did you find them  <i>Prompts: like them, find them helpful, effective or see the missing elements and need for improvement</i></li> <li>7. Why would attend or not attend a training?</li> <li>8. What is the outcome of learning?</li> <li>9. What would you want to learn?</li> <li>10. How do you L&amp;D as a function?  <i>Prompts: Important, challenges faced, functioning, need for improvement</i></li> <li>11. What is the impact of training?  <i>Prompt: business, how to measure</i></li> </ol>

<p>For L&amp;D Professionals</p> <p><i>L&amp;D Department</i></p> <p><i>L&amp;D Process</i></p> <p><i>Key challenges</i></p> <p><i>Essentials of L&amp;D</i></p> <p><i>Critical Success Factors</i></p> <p><i>Good to have of L&amp;D</i></p> <p><i>Impact Evaluation</i></p> <p><i>Behavior Change Initiatives</i></p> <p><i>Intervention Design</i></p>	<p><b>For L&amp;D Professionals</b></p> <p>12. What is the structure of your L&amp;D department?</p> <p>13. What is the L&amp;D process that your organization follows? <i>Prompts: Data, LNA, Design, Development, ADDIE, SAM</i></p> <p>14. What are the key areas or challenges on which your department works to provide interventions? <i>Prompts: Behaviour</i></p> <p>15. What are the hygiene or essential factors important for the smooth functioning of L&amp;D? <i>Prompts: System, process, team, trainers, compliance, quality</i></p> <p>16. What are the critical success factors for L&amp;D? <i>Prompts: business value, standardization</i></p> <p>17. What are the things that are good to have in an L&amp;D system but an organization can still work without it?</p> <p>18. How do you measure and analyze the impact of your interventions on your organization and employees? <i>Prompts: Kirkpatrick model, behaviour impact</i></p> <p>19. Have you taken behavior change initiatives and how have they worked for you? <i>Prompts: BARS, post-training impact</i></p> <p>20. Have you designed any interventions for reducing attrition and how do they work? <i>Prompts: TAT, interventions, examples</i></p>
<p><b>Closing Key Components</b></p> <p>Additional Comments</p> <p>References &amp; Next steps</p> <p>Thank you</p>	<p>Is there anything that you would like to add that can help in this research but we have not yet discussed?</p> <p>I will now be analyzing the information given by you and others interviewed and if you need, I will be happy to send you the summary of my</p>



	analysis. Thank you very much for your valuable time.
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APPENDIX A:  
BEHAVIORALLY ANCHORED RATING SCALE

BARS methodology is used to measure the behaviour of learners and is a popular tool used by Learning and Development professionals

**Behaviourally Anchored Rating Scale**

Behaviour	Level 1	Level 2	Level 3	Level 4
Before I give a prompt to ChatGPT Activity 1: Research to write the About section for your company website.	I start with the content format and key information	I think about format, key information, purpose, target audience before prompting	I clarify expectations from the person giving me the task on purpose, target audience, important information, and expected output or define these myself if I am the decision maker	I clarify expectations on purpose, audience, important points, output and plan a prompt using these details.
When I give prompt to ChatGPT Activity 1: Research to write the About section for your	I write a question that first comes to my mind with format and	I mention the format, audience, and purpose of the content when	I give clear instructions the format, audience, purpose, my	I give clear instructions on format, audience, purpose,



company website	context	framing question	profile, target profile, and expected output	profiles, output and maintain a set of prompts I regularly use to reuse and keep updating them as needed
When I use ChatGPT for website content Activity 1: Research to write the About section for your company website	I write a prompt like ' Write About us for an IT company'	I write a prompt like 'Write About us for an IT company of 100 employee size that has 15 years of existence and provides following products and services ...'	I write a prompt like 'Write an inspirational About us for a 15 year old IT company with 100 employee that has following services and values	I write a prompt with detailed properly identified on what to include as well as mention the references for content, tone, and style of content for the website
When I use ChatGPT for Social Media content Activity 2: Create a post for the LinkedIn	I write a prompt like ' Create a social media post for LinkedIn on...'	I write a prompt like 'Create a social media post from an HR	I write a prompt like 'Write an inspirational social media post from an	I write a prompt with detailed properly identified on what to include

page of your company		manager talking about industry trends'	HR manager talking about industry trends'	as well as mention the references for content, tone, and style of content for the website
When I use ChatGPT for PowerPoint Presentation slides Activity 3: Create a PPT to propose a new app development to a healthcare client	I write a prompt like ' Give me PPT content for this topic"	I write a prompt like 'Give me PPT content for this topic, audience, number of pages.	I write a prompt like 'Give me PPT content for this topic, audience, number of pages, design elements, and theme	I write a prompt like 'Give me PPT content for his topic, audience, number, design elements, and theme topic wise with multiple prompts
When I use ChatGPT for Data Gathering/Data Modeling/Validation/ Coding/UAT Activity 4: Write a python code to analyse	I write a prompt like ' GIve me a C++ code this function"	I write a prompt like 'GIve me a C++ code for this function which uses the following	I write a prompt like 'Give me a C++ code for this function which uses following tables with the	I write a prompt like 'Give me a C++ code for this function using these tables, validations and

patient data using random data for the healthcare app		tables'	following validations and functionalities	functionalities with this scope of application
After ChatGPT gives me content (Take the Example of PPT) Activity 3: Create a PPT to propose a new app to a healthcare client	I will use it as it is	I will review it and if there are content gaps, I will re-prompt by providing more information and use the revised info	I will review it and if there are data or design gaps, I will re- prompt by providing more information, and will edit it on PPT to ensure it matches presentation principles	I will review it for data, design, language, word count, or structural gaps, I will re-prompt by providing more information, and will edit it on PPT to ensure it matches presentation principles and add visuals using AI

#### ACTIVITIES FOR OBSERVATION:

Using ChatGPT, perform the following tasks:

**CONTENT DEVELOPMENT:** Research to write the About section for your company website and LinkedIn company page. Also, create a post for the LinkedIn page of your company

CLIENT PRESENTATION: Create a PPT to propose a new app development to a healthcare client. Write a Python code to analyse patient data using random data for the healthcare app to add a visualization to the PPT

## APPENDIX B:

### INTERVIEW GUIDE FOR L&D PROFESSIONALS

# Interview Questionnaire for Learning and Development Professionals

**Study Objective:** To understand the impact of Learning and Development on Employee behavior

Give your brief profile

Prompts: Name, company, industry, designation, and city

1. What is the structure of your L&D department?

Prompts: Reporting structure

2. What is the L&D process that your organization follows?

Prompts: Data, LNA, Design, Development, ADDIE, SAM

3. What are the key areas or challenges on which your department works to provide interventions?

- Prompts: Behaviour
4. What are the hygiene factors important for the smooth functioning of L&D?  
Prompts: System, process, team, trainers, compliance, quality
  5. What are the critical success factors for L&D?  
Prompts: business value, standardization
  6. What are the things that are good to have in an L&D system but an organization can still work without it?  
Prompts: LMS, gamification, internal trainers, instructional designers
  7. How do you measure and analyze the impact of your interventions on your organization and employees?  
Prompts: Kirkpatrick model, behaviour impact
  8. Have you taken behavior change initiatives and how have they worked for you?  
Prompts: BARS, post-training impact
  9. Have you designed any interventions for reducing attrition and how do they work?  
Prompts: TAT, interventions, examples
  10. Would you like to share any references of other L&D professionals who can help me in this research?  
Prompts: L&D professionals, instructional designers, Talent Managers, Assessors

## APPENDIX C:

### INTERVIEW GUIDE FOR IT EMPLOYEES

# IT Employees Interview Guide

## Needs

- Challenges at work
- Behaviour challenge with others
- What could be done better with guidance
- Common Areas of improvement for resources
- Key concerns of external parties when dealing with your company

## Training Experience

- Trainings attended – types
- How do you find them likes, effectiveness, helpfulness, missing elements, improvement
- Why would you attend or not?
- Training outcome – effective or not why?
- What would you want to learn

## L&D

- Is L&D important and needed?
- Why company doesn't have it?

- Challenges that prevent adoption
- How current L&D function works
- Improvement in current system

### **Impact**

- Impact of training on business
- What do you measure

## APPENDIX D:

### INTERVIEW GUIDE FOR IT LEADERS

# IT Leaders Interview Guide

- Challenges at work
- Behaviour challenge with others
- What could be done better with guidance
- Common Areas of improvement for resources
- Key concerns of external parties when dealing with your company
- Trainings attended – types
- How do you find them likes, effectiveness, helpfulness, missing elements, improvement
- Why would you attend or not?
- Training outcome – effective or not why?
- What would you want your people to learn?
- Is L&D important and needed?
- Why company doesn't have it, if L&D is not there?
- Challenges that prevent adoption
- How current L&D function works if you have L&D department in your company
- Improvement in current system
- Impact of L&D on business
- What do you measure

- L&D for SMEs