Indian Journal of Training and Development

Volume 56, No. 2 April-June, 2026

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From the Desk of Chief Editor

Tracing Failures to Oversimplified Misperceptions

It is not difficult to state in a few words what successful leaders do that makes them effective. But it is much harder to point out the attributes that determine their success. Some leaders rely solely on limited sources of satisfaction such as monetary rewards or the alleviation of fears about various kinds of insecurity. The task is adhered to because following orders will lead to a paycheck, and deviation will lead to unemployment. Such forms of motivation are effective within limits. In a mechanical way they do attach the employee's self-interest to the interest of the employer or the group. But no one can doubt the weaknesses of such simple techniques. Human beings are not machines with a single set of push buttons. When their complex responses to love, prestige, independence, achievement, and group membership are unrecognized on the job, they perform at best to bring far less than their maximum efficiency to the task, and at worst to consciously or unconsciously sabotage the activities they are supposed to be furthering.

The military undeniably has special problems. Because men get killed and have to be replaced, there are important reasons for treating them uniformly and mechanically. Clarity about duties and responsibilities, as maximized by the autocratic chain of command, is not only essential to warfare but has undoubted importance for most group enterprises. In fact, any departure from an essentially military type of leadership is still considered in some circles a form of anarchy.

It is not desirable to confuse the chain of command or table of organization with a method of getting things done. It is instead comparable to the diagram of a football play which shows a general plan and how each individual contributes to it. The diagram is not leadership. By itself it has no bearing one way or another on how well executed the play will be. Yet that very question of effective execution is the problem of leadership. Rewards and threats may help each player to carry out the assignment, but in the long run if success has to sustain and if morale has to remain high, each player must not only fully understand his/her part and its relation to the group effort; he/she must also *want* to carry it out. The problem of every leader is to create these wants and to find ways to channel existing wants into effective cooperation.

For followers to recognize their leader as he/she really is may be as difficult as it is for the leader to understand them completely. Some of the worst difficulties in relationships between superiors and subordinates come from misperceiving reality. So much of what we understand in the world around us is coloured by the prejudices we start with. My view of my employer or superior may be so coloured by expectations based on the behaviour of other superiors that facts may not appear in the same way to the leaders and to the employee. Many failures of leadership can be traced to oversimplified misperceptions on the part of the employee or to failures of the superior to recognize the context or frame of reference within which his/her actions will be understood by the subordinate.

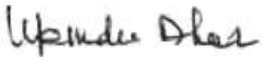
If we describe a person as warm, intelligent, ambitious, and thoughtful, one gets one kind of picture of him/her. But if we describe another person as cold, ambitious, thoughtful, and intelligent, one probably gets a picture of a very different kind of person. Yet we have merely changed one word and the order of a couple

of others. The kind of preparation that one adjective gives for those that follow is tremendously effective in determining what meaning will be given to them. The term “thoughtful” may mean thoughtful of others or perhaps rational when it is applied to a warm person toward whom we have already accepted a positive orientation. But as applied to a cold man the same term may mean brooding, calculating, plotting. We must learn to be aware of the degree to which one set of observations about a person may lead us to erroneous conclusions about his/her other behaviour.

An ideal organization should have employees at every level reporting to someone whose dominion is small enough to enable him/her to know those people as human beings who report to him/her. If we show two groups of observers a film of an exchange of views between an employer and his/her subordinate. The scene portrays disagreement followed by anger and dismissal. The blame for the difficulty will be assigned very differently by the two groups if we have shown one a scene of the employee earlier in a happy, loving family breakfast setting, while the other group has seen instead a breakfast-table scene where the employee ridicules at his family and storms out of the house. The altercation will be understood altogether differently by people who have had favourable or unfavourable glimpses of the character in question.

In business, an employee may perceive an offer of increased authority as a dangerous removal from the safety of assured, though gradual, promotion. A change in channels of authority or reporting, no matter how valuable in increasing efficiency, may be thought of as a personal challenge. The introduction of a labour-saving process may be perceived as a threat to one’s job. An invitation to discuss company policy may be perceived as an elaborate trap to entice one into admitting disloyal views. A new fringe benefit may be regarded as an excuse not to pay higher salaries. And so on.

Too often, the superior is entirely unprepared for these interpretations, and they seem to him/he - stupid, dishonest, or perverse - or all three. But the successful leader will be prepared for such responses. He/she will have known that many of employees have been brought up to consider their employers as their natural enemies, and that habit has made it second nature for them to “act like an employee” in this respect and always to be suspicious of otherwise friendly overtures from above. The other side of the same situation is as bad. The habit of acting like a boss can be destructive, too. For instance, much resistance to modern concepts of industrial relations comes from employers who think such ideas pose too great a threat to the long-established picture of themselves as business autocrats. Their image makes progress in employee relations difficult.



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Effectiveness of Pre- and Post-test Model for Output Assessment in Administrative Training

Sachin B.S.*, Saravana K., Dileep Kumar***, Rajashekar C.*****

ABSTRACT

Pre- and post-tests are used to measure knowledge gained from a training program. Active learning strategies include trainees being engaged in activities, i.e., involved in more than passive listening, greater emphasis placed on developing participants' skills. The quantitative as well as qualitative data were collected as the primary source to explore and describe the intervention. The pre- and post-test data were collected from 106 trainees of 4 batches of 5 days training conducted at the Administrative Training Institute by the Center for Social Justice and Equality for "A" and "B" cadre officers of various departments of the Government of Karnataka. Overall, the results across all four teams emphasize that the training program succeeded in enhancing participants' awareness and attitude to social justice. The uniform trend of improvement underscores the value of structured training interventions in fostering social justice competencies among trainees.

KEYWORDS

ASTD, Attitudinal changes, Coaching, Impact assessments, Improvement

INTRODUCTION

Pre- and post-tests are used to measure knowledge gained from participating in a training course. Active learning strategies include trainees are engaged in activities (e.g., reading, discussing, and writing), i.e., involved in more than passive listening, greater emphasis placed on developing participants skills. This article evaluates the pre- and post-test model in administrative training by analyzing quantitative as well as qualitative data from the training. Pre- and post-tests are used to measure knowledge gained from participating in a training course.

Active learning strategies include trainees being engaged in activities (e.g., reading, discussing, and writing), i.e., involved in more than passive listening, with greater emphasis placed on developing participants skills.

Osler (1913) proposed eliminating the lecture method of instruction and giving students more time to study. He also emphasized the importance of trainers in assisting trainees with observation and reasoning. The traditional method of training and learning (TL) is no longer sufficient. Today's administrative trainees, the so-called "new generation," have grown up in a multimedia civilization; training them using methods developed decades ago is insufficient and unreasonable (Sahu & Lata, 2010). Training assessment is simply a process that identifies participants' current levels of skill, knowledge, and attitude and compares them to the organization's benchmark. It is an effective method of dealing with competency gaps because it helps identify the difference and identifies training needs. These training assessments can take place at any time, and

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there are two main types of training assessment tests. They are:

1. ***Pre-Training Assessment Test (Baseline):*** The pre-training test is administered either at the very start of the candidate's training or before the training begins. Pre-tests are given to the candidates before the instructions are presented to screen out the candidates that are not the right fit for the training.
2. ***Post-Training Assessment Test (Endline):*** Post-training assessment tests are administered at the very end of the user training once.- The training modules have been completed.

Training evaluation includes the delineation and measurement of specific outcomes to determine the organizational and trainee-level benefits engendered by training initiatives (Huang & Shen, 2021). Chirayu (2012) elaborates on the concept of training evaluation, describing it as a systematic procedure involving the thorough collection of descriptive and subjective information that is critical for making well-informed training decisions, encompassing aspects such as selection, integration, value assessment, and customization within the scope of training initiatives. Training evaluation is typically positioned as the final phase of the training continuum (Antoniou and Kyriakides, 2013).

Nonetheless, Avalos (2011) believes that fundamentally reengineering the entire training paradigm is necessary. While conventional perspectives view training as a reactionary response to performance constraints, a more optimal configuration places it as a critical intermediary course of action. Following training, managers, trainers, and trainees should work together to apply acquired training insights purposefully, while also providing diligent on-the-job management coaching (Alfonso & Ramirez, 2021).

REVIEW OF LITERATURE

Shivaraju *et al*. (2017) conducted a study on "Evaluating of the effectiveness of a pre- and post-test model of learning in a medical school" in which 156 second-year MBBS students took pre- and post-tests. The post-test correct responses were significantly higher ($P < 0.05$) than the pretest responses. Gender-wise, both males ($P = 0.004$) and females ($P = 0.001$) had significantly improved post-test responses, with females showing a greater improvement in post-test scores. Overall, marks improved in the post-test, with the majority of students scoring above five and none of them performing poorly. The overall mean scores showed that all students' post-test scores improved significantly when compared to their pretest scores (Shivaraju *et al*., 2017).

The evidence suggests that multiple administrative training programs produce consistent positive outcomes. Banuwa *et al*. (2021) discovered significant differences ($p<0.05$) between pre- and post-test scores in technical training for 30 participants (Banuwa & Susanti, 2021). Fajrizka and Rumana (2016) discovered significant differences between pre-test (53%) and post-test (60%) scores in disease classification training. However, Maria Iflah *et al*., 2022 identified critical limitations: current pre- and post-test approaches only capture Kirkpatrick levels 1-2 (reaction and learning), leaving out levels 3-4 (behavior and results), resulting in a failure to measure actual workplace performance improvements. Wulandari and Pogo (2023) demonstrated positive outcomes in office administration training across three Kirkpatrick levels, indicating the potential for more comprehensive approaches.

Review indicates that while pre- and post-testing is effective at measuring immediate learning gains, comprehensive evaluation models that include behavioral and organizational impact assessments are required for optimal training effectiveness measurement. It was found that training pre and post test can be beneficial to trainer to evaluate improvement of trainees. Several evaluation models have been proposed in the literature, including Galvin's CIPP (1983), Brinkerhoff's model (1987), Kraiger, Ford, and Salas' model (1993), Holton's model (1996), and Phillip's model (1966). However, Donald Kirkpatrick's four-level evaluation model, developed in 1967, is the most widely used. This model has

four levels of evaluation: (i) Level 1 Reaction, (ii) Level 2 Learning, (iii) Level 3 Behavior, and (iv) Level 4 Results. According to Kirkpatrick, each level is necessary and influences the next. As the assessor progresses through the levels, the process becomes more complex and time-consuming.

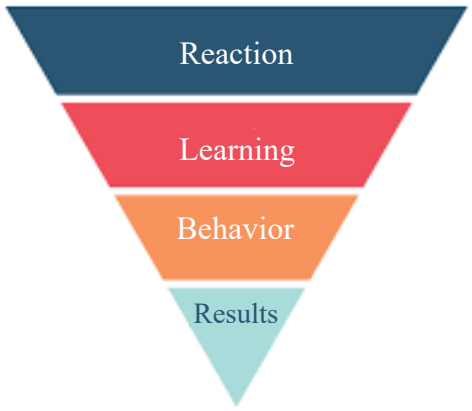


Figure 1: Kirkpatrick's four levels of evaluation model

Pre- and post-tests are important in the Kirkpatrick model because they are used to assessLevel 2: Learning, which measures the knowledge, skills, and attitudes that participants have acquired. Organizations can objectively measure the impact of training on learning by comparing pre- and post-test scores, identifying knowledge gaps, and determining whether learning objectives were met. This process is an important step in the Kirkpatrick model's four-level framework, which also evaluates reaction, behavior, and outcomes (Kirkpatrick, 1998) (Fig. 1).

Relevance of Pre- and Post-tests within the Kirkpatrick Model

- ***Establishing a baseline:*** A pre-test establishes a participant's starting knowledge or skill level before the training begins. This provides a crucial benchmark for later comparison.
- ***Measuring learning:*** By comparing the pre-test and post-test results, you can see the change in a participant's performance, indicating the amount of knowledge or skills acquired from the training.
- ***Objectivity:*** Using pre- and post-tests provides an objective way to measure learning, which is often more reliable than just asking participants how they feel about the training (Level 1).
- ***Identifying knowledge gaps:*** The comparison helps identify what was learned and what was not, allowing for the improvement of course content or future follow-up training.
- ***Part of a comprehensive model:*** Pre- and post-tests are a specific tool used in Level 2 (Learning) of the Kirkpatrick model. The full model goes beyond this to also evaluate participants' reactions (Level 1), changes in behavior on the job (Level 3), and the final business results (Level 4).

METHOD

The study was descriptive and exploratory in nature. So, a descriptive and exploratory research design was used. For this study, both quantitative and qualitative data were collected as primary sources to investigate and describe the intervention of the pre and post questionnaire tools. The Center for Social Justice and Equality used pre- and post-tests to assess trainees' knowledge and attitudes. The same questions were used for pre- and post-test assessments to determine trainees' improvement in knowledge and skills related to the concepts of social justice, equality, and equity. We have posed twenty questions and each question carries 2 marks in total the trainees have to take the same 20 questions for 40 marks during baseline and end-line. This pre- and post-test were conducted to know the effectiveness of the training; the data was collected by using a Google form QR code link. Here we have come up with the pre- and post-test data from four batches of 5 days of training conducted at the Administrative Training Institute by the Center for Social Justice and Equality for "A" and "B" cadre officers of various departments of the Government of Karnataka. Data were collected from a total of 106 trainees.

Participants Detail

	Male	Female	Total
Team 1	19 (73)	07 (27)	**26 (100)**
Team 2	12 (57)	09 (43)	**21 (100)**
Team 3	20 (65)	11 (35)	**31 (100)**
Team 4	18 (64)	10 (36)	**28 (100)**
	69	37	**106**

(Percentage is given in the parentheses)

The above table shows the training participants total number and gender wise classification. From team 1 there were 26 participants among them 73% of them are male and remaining 27% are female. From team 2 there are 21 participants among them 57% of them are male and rest 43% of them are female. From team 3 total 31 participants were participated among them 65% of them are male and 35% of them are female. From team 4 there were 28 participants among them 64% of them are male and rest 36% of them are female. From the above data it was clear that, most of the respondents are male. Informed oral consent was sought from the respondents for assessing pre and post test data. The all respondents' information kept confidential in this study. For statistical analysis, simple percentage and arithmetic mean were used.

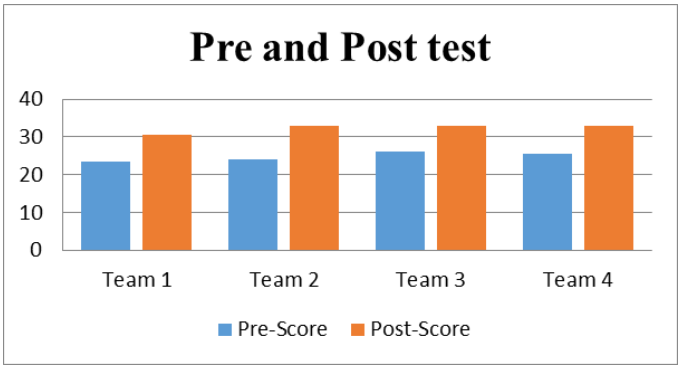
RESULTS

The results of the four training teams are given below in Table 1.

Table 1: Details of Pre- and Post-test results

Team	Pre-Score (Mean Score)	Post-Score (Mean Score)	Difference	Changes in %
Team 1	23.51	30.63	5.12	30.28
Team 2	24.11	32.92	8.81	36.62
Team 3	26.12	32.94	6.82	26.11
Team 4	25.41	33.02	7.61	29.94

The above table depicts the changes in terms of knowledge and attitude about social justice from the pre-test to the post-test visible. A clear difference of 5.12 average marks (changes in 30.28%) could be seen in team 1 by comparing to pre with post-average trainees secured marks in the tests. improvement could be traced in team number 2 of 8.81 i.e., 36.62% of changes in secured average marks of trainees after taking five days of training. Team number 3 secured hike of 6.82 marks from pre to post test it was considered as 26.11% of the changes. Whereas team number 4 secured 7.61 marks hike with 29.94% marks hike comparatively with pre and post test of 5 days social justice training (Graph 1).



Graph 1: Pre- and Post-test results

When we find a statistically significant difference between the mean of the differences, we may decide to create a bar chart in which the mean of the first outcome variable (Pre-test) and the mean of the second outcome variable (Post-test) are displayed as separate bars. It shows knowledge and attitude about social justice and equality has increased considerably after attending five days of training at the Administrative Training Institute. It was evident that this pre- and post-test can be useful to compare the level of knowledge and attitude before and after training. The results of the pre- and post-test comparison clearly indicate that the five-day training program on social justice had a positive impact on the knowledge and attitude of all four trainee teams. The improvements across teams, though varied in magnitude, demonstrate the overall effectiveness of the training intervention.

Team 1 showed an improvement of 5.12 average marks, which accounts for a 30.28% increase. This suggests that the participants of Team 1 were able to effectively assimilate the concepts delivered during the sessions, although their gains were comparatively moderate when viewed against other groups. Team 2 demonstrated the highest level of improvement, recording an increase of 8.81 marks, corresponding to a 36.62% change. This remarkable progress indicates that the training content and methodologies strongly resonated with this group, possibly reflecting greater engagement, active participation, or better pre-existing readiness to internalize the knowledge. Team 3 registered an increase of 6.82 marks, equal to a 26.11% improvement. While this was the lowest percentage increase among the groups, the data

still reflects substantial gains in terms of learning outcomes, confirming that the training program contributed positively to their understanding and attitudes toward social justice.

Similarly, Team 4 exhibited an improvement of 7.61 marks, representing a 29.94% increase. This growth highlights both the consistency of the training's effectiveness and the ability of participants to translate training inputs into measurable knowledge and attitudinal shifts. Overall, the results across all four teams emphasize that the training program succeeded in enhancing participants' awareness and attitudes about social justice. The differences in percentage improvements suggest variations in baseline knowledge, learning pace, and possibly group dynamics. Nevertheless, the uniform trend of improvement underscores the value of structured training interventions in fostering social justice competencies among trainees.

Along with quantitative data from baseline and end line some of the opinions (qualitative) towards these tests were sought from the trainees. One of the trainees opined *that "pre-test and post-test were useful to assess our knowledge and learning output from the training*". Another trainee opined "*I was not aware of social justice, equality, equity and pertaining acts these pre- and post-tests helped me to delve more into these aspects".*

"We were not aware of many aspects especially equity through pre- and post-test questions we could able to overcome some misconceptions". One more trainee opined that " I had my pre-conception regarding society after going through pre- and post-test I came to know many facts that being a Government servant I must accomplish in my personality to address those social justice issues".

"Going through pre- and post-test in the training helped me to gauge my knowledge and changes happen in my knowledge and attitude after undergoing training programmes organized by the Center for Social Justice and Equality of Administrative Training Institute"

DISCUSSION

Padmanabha Thiruganahalli Shivaraju and others' (2017) study on "Evaluating of the effectiveness of pre- and post-test model of learning in a medical school" yielded similar results. When compared to the pretest, post-lecture assessment resulted in a significant improvement in recipient knowledge. Only 56 (35.90%) of the 156 students scored between 5 and 8, while 100 (64.10%) scored less than 5. These scores improved in post-test by 78.21% (122) with scores ranging from 5 to 8, while 21.79% (34) with scores greater than 8, indicating a high recipient group with good cognitive structure improvement. Conclusion: Voluntary participation in such tests provides feedback on teachers' teaching effectiveness and the adequacy of learners' knowledge (Shivaraju *et al*., 2017).

According to ASTD (American Society for Training and Development), in its State of Industry Report (2003), the Donald Kirkpatrick model consists of four levels of evaluation. A survey of 276 organizations found that 75% of organizations collected reaction measures, 41% learning measures, 21% job behavior measures, and only 11% collected business impact measures (Werner & DeSimone, 2006). In a similar study conducted for nursing students by Shivaraju, Padmanabha & Gangadhar, Manu & M, Vinaya & Savkar, Madhav (2017) on evaluating the effectiveness of a pre- and post-test model of learning in a medical school, they found a significant improvement in recipient knowledge after post-lecture assessment when compared to pretest.

Only 56 (35.90%) of the 156 students scored between 5 and 8, while 100 (64.10%) scored less than 5. These scores improved in post-test by 78.21% (122) with scores ranging from 5 to 8, while 21.79% (34) with scores greater than 8, indicating a high recipient group with good cognitive structure improvement. Conclusion: Voluntary participation in such tests provides feedback on teachers' teaching effectiveness and the adequacy of learner knowledge (Shivaraju, Gangadhar, and Vinay, 2017). It was evident from the above studies that pre and post tests shall be useful for evaluating training output.

Do's in the Pre- and Post-Test

- The pre- and post-test questions must be pertinent to the theme of the training.
- The length of questions must be short.
- Avoid Jorgen and ambiguous words.
- Based on the education level of the trainees we must prepare questions.
- The pilot test needs to be conducted for changes in cultural and language adaptation.

Don'ts in the Pre- and Post-Test

- Avoid open-ended questions.
- A pre-test must be conducted before the session.
- Avoid leading and biased questions.

CONCLUSION

The results of the study highlight that, the simplest evaluation design is pre- and post-test to measure whether the expected changes took place in the participants in a training program. From the above data, it was evident that the pre- and post-test assessments were indeed helpful to measure changes that happened in terms of the knowledge and attitudes of the trainees. This model helped trainees to introspect their knowledge and attitudinal gaps in understanding the phenomena. For trainers, it is evident to see differences before and after training and also it will be helpful to forecast the future training needs. In addition to that, it was evident Pre and post test model is effective in administrative training output assessment.

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Employability Gap among the Job Seekers

Ankit Shaw*

ABSTRACT

The transition from higher education to employment remains a critical challenge in emerging economies like India, where a significant mismatch persists between academic preparation and industry expectations. This study examines the phenomenon termed the "Experience–Freshers Paradox," wherein fresh graduates are expected to possess prior work experience for entry-level roles, creating structural barriers to workforce entry. The research aims to analyse employability challenges faced by fresh graduates, identify skill gaps, and evaluate employer expectations through a multistakeholder perspective. A descriptive research design was adopted using primary data collected from 103 respondents, including 67 students from AICTE-approved institutions and 36 employers across diverse industries. The findings reveal a significant gap between graduate competencies and employer expectations. Employers prioritise practical exposure, professional attitude, and job readiness, while academic institutions continue to emphasise theoretical knowledge. This misalignment reinforces the Experience–Freshers Paradox, limiting employment opportunities for fresh graduates and increasing hiring challenges for organizations. The study recommends integrating experiential learning, digital skill development, and competency-based education into academic curricula to enhance workforce readiness.

KEYWORDS

Experience-Freshers Paradox, Skill Mismatch, Graduate Employer Expectations, Industry-Academia Gap, Workforce Readiness

INTRODUCTION

India possesses one of the largest higher education systems in the world, producing millions of graduates every year across diverse academic disciplines. However, despite this vast output of educated youth, employability continues to remain a significant challenge in the Indian labor market (Blom & Saeki, 2011; India Skills Report, 2024). Studies consistently indicate that a substantial proportion of graduates lack the industry-relevant skills required by employers, resulting in a persistent employability gap between academic training and workplace expectations (Cappelli, 2015; Yorke, 2006). This gap has emerged as a critical concern for policymakers, educational institutions, and employers alike, particularly in developing economies where higher education expansion has outpaced the development of job-ready competencies (Tomlinson, 2017).

The employability gap is often attributed to the mismatch between theoretical knowledge delivered in academic institutions and the practical competencies demanded in modern organizations (Blom & Saeki, 2011). Employers increasingly prioritize candidates who possess not only technical knowledge but also essential employability skills such as communication, analytical thinking, adaptability, digital literacy, and problem-solving capabilities (Jackson, 2016; Andrews & Higson, 2008). However, many graduates enter the labour market without adequate exposure to real-world business environments, internships, or

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industry-oriented training. As a result, organizations frequently perceive fresh graduates as lacking the necessary professional competencies required for immediate workplace integration (Sharma & Sharma, 2020).

This situation gives rise to what may be described as the Experience–Freshers Paradox, where employers prefer candidates with prior work experience even for entry-level positions. Consequently, fresh graduates encounter significant barriers in securing their first employment opportunity, making it difficult for them to acquire the experience that employers demand (Cappelli, 2015). The paradox creates a cyclical challenge in the labour market: graduates remain unemployed due to lack of experience, while organizations struggle to find candidates who are sufficiently prepared to meet industry expectations. Such structural mismatches contribute to underemployment, skill underutilization, and increased frustration among young job seekers (Tomlinson, 2017).

The challenge of graduate employability has intensified in recent years due to rapid technological advancements, globalization, and the growing digitalization of workplaces. Modern organizations increasingly require employees who are capable of working with emerging technologies, data analytics, artificial intelligence, and digital platforms (World Economic Forum, 2023). In addition to technical competence, employers also emphasize soft skills such as teamwork, leadership potential, and adaptability to dynamic organizational environments (Jackson, 2016). However, higher education institutions often struggle to update curricula at the same pace as industry transformation, further widening the gap between academic preparation and labour market requirements (Andrews & Higson, 2008).

In the Indian context, the employability gap is particularly visible among management and professional graduates who aspire to build careers in sectors such as human resources, banking, information technology, and service industries. Reports indicate that only a limited proportion of graduates are considered fully employable by industry standards, highlighting the urgent need for skill development and industry exposure during academic training (India Skills Report, 2024). Employers frequently highlight deficiencies in areas such as digital competence, business communication, analytical thinking, and practical problem-solving abilities among fresh graduates (Sharma & Sharma, 2020). These deficiencies often discourage organizations from recruiting freshers and instead encourage them to hire experienced candidates, thereby reinforcing the Experience–Freshers Paradox.

Addressing this challenge requires a comprehensive and collaborative approach involving educational institutions, industry stakeholders, and policymakers. Strengthening industry–academia collaboration, promoting experiential learning through internships and live projects, and integrating digital and analytical skills into academic curricula are widely recommended strategies to enhance graduate employability (Yorke, 2006; Jackson, 2016). Furthermore, the implementation of skill-based education initiatives and vocational training frameworks, particularly under policy reforms such as the National Education Policy (NEP) 2020, aims to improve students' job readiness by emphasizing practical learning and multidisciplinary competencies (Government of India, 2020).

Against this backdrop, understanding the perspectives of key stakeholders including students, employees, employers, and professors becomes essential for identifying the underlying causes of the employability gap. Each stakeholder group plays a crucial role in shaping employability outcomes, from curriculum design and skill development to recruitment practices and workplace expectations. By examining these perspectives, it is possible to gain deeper insights into the structural barriers that contribute to the Experience–Freshers Paradox. Therefore, this study seeks to analyze the employability gap and the Experience Freshers Paradox in the Indian labor market by exploring perceptions from multiple stakeholders. The research aims to identify the factors contributing to graduate unemployability and

propose actionable strategies that can help bridge the gap between academic preparation and industry expectations. Addressing this gap is essential not only for improving employment opportunities for fresh graduates but also for enabling organizations to access a skilled, adaptable, and future-ready workforce, this study contributes to the existing literature by adopting a multistakeholder approach.

Statement of the Problem

Despite the rapid expansion of higher education in India, the transition from education to employment remains a significant challenge for fresh graduates. Every year, millions of students complete undergraduate and postgraduate programs with the expectation of securing meaningful employment opportunities. However, a considerable number of these graduates struggle to obtain their first job due to the increasing emphasis placed by employers on prior professional experience. This situation creates a structural contradiction in the labour market where fresh graduates are expected to possess experience before being given an opportunity to acquire it.

This contradiction, referred to in this study as the "Experience Freshers Paradox," highlights a persistent mismatch between academic preparation and industry expectations. While higher education institutions focus primarily on theoretical knowledge and academic evaluation, employers increasingly prioritize practical exposure, digital competence, communication skills, and adaptability. As a result, many graduates enter the job market without the competencies required to perform effectively in professional environments. Employers often prefer experienced candidates even for entry-level positions, as they are perceived to require less training and adapt more quickly to organizational demands. Consequently, fresh graduates encounter repeated rejections during recruitment processes, leading to frustration, underemployment, and delayed career progression. At the same time, organizations report difficulties in finding candidates who are immediately work-ready, suggesting that the issue lies not only in job availability but also in the preparedness of graduates.

This problem has broader implications for both individuals and the economy. For graduates, the inability to secure initial employment opportunities limits their ability to gain practical experience and develop professional skills. For organizations, the shortage of job-ready talent increases recruitment costs and slows workforce integration. Moreover, the gap between education and employment may lead to underutilization of human capital and reduced productivity within the labour market. Therefore, there is a need to systematically examine the factors contributing to this paradox by analysing perspectives from multiple stakeholders, including students, employees, employers, and professors. Understanding these perspectives can help identify the underlying causes of the employability gap and provide insights into strategies that can bridge the disconnect between academic training and industry expectations.

REVIEW OF LITERATURE

The literature reviewed in this study consists of academic journals, research books, industry reports, government publications, and theoretical frameworks related to employability and labour market dynamics. Scholarly works on employability, human capital development, and job fit theory were examined to understand how education, skills, and labour market expectations interact. In addition, industry reports and policy documents were analysed to capture real-world trends in the Indian job market, including employer expectations, skill shortages, and the increasing demand for practical experience. These sources provided both theoretical insights and empirical evidence regarding the challenges faced by fresh graduates in securing employment.

The primary purpose of conducting the literature review was to understand the existing body of knowledge on the employability gap and the preference for experienced candidates in entry-level hiring. Reviewing previous studies helped identify the major factors influencing employability, such

as skill mismatch, lack of practical exposure, and changing industry requirements. Most importantly, the literature review was undertaken to identify gaps in previous research and determine how this dissertation can contribute to the field. While many studies discuss skill gaps and employability in general, fewer studies analyse the issue from multiple stakeholder perspectives including students, employees, employers, and professors simultaneously. Therefore, this research attempts to address that gap by examining the Experience–Freshers Paradox through a multistakeholder approach, which helps provide a more comprehensive understanding of the employability challenge in the Indian context.

Aggarwal (2020) provides a comprehensive analysis of the impact of globalization and economic liberalization on the Indian economy. The author argues that these forces have intensified competition in the job market, necessitating a workforce that possesses globally relevant skills, including not only technical expertise but also soft skills such as communication, collaboration, and critical thinking. The book highlights the challenges faced by Indian graduates in meeting these evolving demands and the need for reforms in the education system to better align with industry needs.

Mundle (2024) offers insights into the structural shifts occurring within the Indian labor market. The author points out a pre-pandemic trend of workforce movement from the agricultural sector to non-agricultural sectors. While this shift indicates a degree of economic progress, Mundle notes that a significant portion of this movement has been towards low-skill, low-paid jobs in the informal sector, rather than high-skill, high-wage employment in the formal sector. This trend underscores the challenges of creating quality employment opportunities for India's large and growing workforce and the implications for the employability of fresh graduates.

The Economic Times (2023) highlights under the heading of Worthless degrees are creating an unemployable generation in India, 2023 a concerning paradox: despite India's rapid economic growth and increasing number of graduates, a significant portion of these graduates lack the skills that employers demand. The report cites studies indicating that a substantial percentage of graduates, including those from technical fields like engineering, are deemed unemployable by industry due to a lack of practical skills, industry exposure, and relevant competencies. This paradox underscores the urgent need to address the skill gap and improve the quality and relevance of higher education in India.

Rao (2021) examines the various dimensions of this employability gap, particularly within the context of engineering students in India. The author notes that fresh graduates often face challenges in securing employment due to a lack of industry-relevant skills, such as practical application of knowledge, problem-solving abilities, and technical proficiency in specific software or tools. Additionally, Rao highlights deficiencies in essential soft skills, including communication, teamwork, and critical thinking, which are increasingly valued by employers across sectors. Mitra (2019) further emphasizes the complexities of youth employment in India, pointing to structural issues within the labor market, inadequate vocational training, and the challenges of transitioning from education to employment.

Kapoor & Sharma (2022) delve deeper into the root causes of the employability gap, focusing on the disconnect between academic curricula in many Indian educational institutions and the evolving skill requirements of industries. The authors argue that traditional academic programs often prioritize theoretical knowledge and rote learning, with limited emphasis on practical application, hands-on experience, and the development of industry specific skills. This disconnects leaves graduates ill-prepared for the demands of the modern workplace, hindering their employability and contributing to the preference for experienced candidates among employers.

Dawis & Lofquist (1984) in A Psychological theory of work adjustment laid the foundation for much of

the subsequent research on P-J fit. They proposed that work adjustment is a process of achieving and maintaining correspondence between an individual's needs and the supplies offered by the work environment, as well as between the demands of the work environment and the individual's abilities. This theory highlights the importance of both needs-supplies (NS) fit and demands-abilities (DA) fit in understanding employee satisfaction, performance, and turnover. Edwards (1991) provided a comprehensive conceptual integration, literature review, and methodological critique of the P-J fit construct. This work helped to clarify the different dimensions of P-J fit, examine the various ways in which it has been measured, and synthesize the research on its antecedents and consequences. Edwards's review contributed significantly to the development and refinement of P-J fit as a key concept in organizational behavior research.

Kristof-Brown (1996) conducted a meta-analytic review of the consequences of individuals' fit at work. This meta-analysis synthesized findings from numerous empirical studies and provided strong evidence for the positive relationships between P-J fit and various desirable outcomes, including increased job satisfaction, improved job performance, and reduced turnover intentions. The study also examined the relative importance of different dimensions of fit and the moderating effects of various contextual factors. O'Reilly, *et al*. (1991) developed a profile comparison approach to assess P-O fit. They argued that P-O fit can be understood as the congruence between an individual's value profile and the organization's value profile. Their study demonstrated that individuals who perceive a strong fit with the organization's values tend to exhibit higher levels of organizational commitment, job satisfaction, and lower turnover.

Verquer, *et al*. (2003) conducted a meta-analysis of the relations between P-O fit and work attitudes. Their meta-analysis confirmed the significant and positive relationships between P- O fit and various work-related attitudes, such as job satisfaction, organizational commitment, and organizational identification. The study also explored the different ways in which P-O fit has been measured and the implications of these different measurement approaches for research findings. The application of Job Fit Theory to the context of entry-level hiring and the Experience- Freshers Paradox is particularly relevant. Employers may perceive a higher degree of risk and uncertainty associated with hiring fresh graduates, who typically have limited prior work experience, compared to experienced candidates with a proven track record. This perceived risk may stem from uncertainty about the fresher's P-J fit (i.e., whether they possess the requisite skills and abilities to perform the job effectively) and their P-O fit (i.e., whether their values and personality align with the organization's culture and values).

Becker (1962) in his seminal work on human capital theory, provided a foundational framework for understanding employer investment in employee training. Employers often view hiring experienced candidates as a way to minimize their investment in training, as these candidates are assumed to have already acquired some of the necessary skills and knowledge through prior work. Bishop (1993) further elaborated on the issue of underinvestment in training by employers. The author argued that employers may be reluctant to invest in training fresh graduates due to concerns about the return on investment. Specifically, employers may fear that newly trained employees will leave the organization shortly after acquiring valuable skills, taking their investment with them. This reluctance can lead to a preference for experienced candidates who are perceived as requiring less training.

Autor (2019) discussed about the changing nature of work and how technology is impacting the demand for different types of skills. Employers often seek experienced candidates because they are perceived to be more readily adaptable to these changes and to possess the specific technical skills required for increasingly complex job roles. Schneider (1987) emphasized the importance of "person-organization fit" and how "the people make the place". Employers often prefer experienced candidates who have a

proven track record of fitting well into organizational cultures and working effectively with existing teams. This preference stems from a desire to minimize disruption, maintain team cohesion, and ensure a smooth transition for new hires.

Bertrand & Mullainathan (2004) in their research on labor market discrimination highlighted that unconscious biases in hiring practices can also inadvertently Favor candidates with prior work experience. Employers may unconsciously associate experience with competence and reliability, leading them to prioritize experienced candidates over equally qualified freshers. Agarwal (2023) in their study on employability determinants of management graduates in India, found that employers prioritize practical skills and real-world experience, which fresh graduates often lack. This emphasis on practical application and hands-on experience further contributes to the preference for candidates with prior work experience.

Yorke (2006) discusses the concept of "employability" in higher education, emphasizing that it is not solely about possessing specific skills but also about developing a broader set of attributes and capabilities that enable individuals to succeed in the workplace. These attributes include self-awareness, self-management, learning agility, and a proactive attitude towards career development. Mishra & Sharma (2022) in their research on skill requirements for Industry 4.0, with a focus on Indian employers' perspectives, emphasise the growing importance of skills like critical thinking, creativity, and complex problem-solving. As Indian industries increasingly adopt advanced technologies and automation, employers are seeking candidates who cannot only operate these technologies but also think critically, solve complex problems, and contribute to innovation.

The ability to learn and adapt quickly is also crucial, as the pace of technological change necessitates continuous upskilling and reskilling. It can be showcased on LinkedIn profiles, have also become a popular way for freshers to enhance their employability and demonstrate their commitment to continuous learning. Chatterjee *et al*. (2018) explore the "Indian Paradox" of rising education levels and declining women's employment. Their research reveals that despite increasing educational attainment among women in India, their labor force participation rates have been declining in recent decades. The authors attribute this paradox to a complex interplay of factors, including social norms, family responsibilities, and a lack of suitable job opportunities that align with women's educational qualifications and aspirations. This paradox highlights a broader challenge in the Indian context: that increasing educational attainment does not always translate into improved employment outcomes, particularly for certain segments of the population.

Tilak (2024) examines the challenges of aligning higher education with the needs of the labor market in India. The author argues that while India has made significant strides in expanding access to higher education, the quality and relevance of this education have not always kept pace with the evolving demands of the economy. Tilak points out that the rapid expansion of higher education has, in some cases, led to a dilution of quality, with many graduates lacking the specialized skills and practical knowledge required by employers. This misalignment between higher education and labor market needs contributes to the employability challenges faced by fresh graduates and exacerbates the Experience-Freshers Paradox.

Research Gap

A substantial body of literature exists on graduate employability, skill mismatch, and labor market dynamics. Previous studies have examined issues such as the lack of industry-relevant skills among graduates, the importance of internships and practical exposure, and the evolving skill requirements of modern organizations. Research has also highlighted the growing importance of soft skills, digital competencies, and adaptability in improving employability outcomes. However, most existing studies focus primarily on either student perceptions or employer expectations, often analysing employability from a single stakeholder

perspective. While these studies provide valuable insights into specific aspects of the employability challenge, they do not fully capture the complex interactions between different actors involved in the transition from education to employment.

Another limitation in existing research is the limited empirical focus on the Experience–Freshers Paradox, where fresh graduates are expected to possess prior work experience for entry-level roles. Although several studies discuss skill gaps and employability challenges in general, fewer studies explicitly examine how employer hiring practices and graduate preparedness interact to create barriers for fresh entrants into the labor market. Furthermore, many studies rely on large-scale national datasets or employer surveys, which may overlook the contextual insights that can be obtained from comparing perspectives across multiple stakeholder groups such as students, early-career employees, employers, and academic professionals.

Therefore, this study seeks to address these gaps by adopting a multistakeholder approach to examine the employability gap and the Experience–Freshers Paradox. By analysing perceptions from students, employees, employers, and professors simultaneously, the research aims to provide a more comprehensive understanding of the factors influencing graduate employability and identify practical measures that can bridge the gap between higher education and industry requirements (Fig. 1).

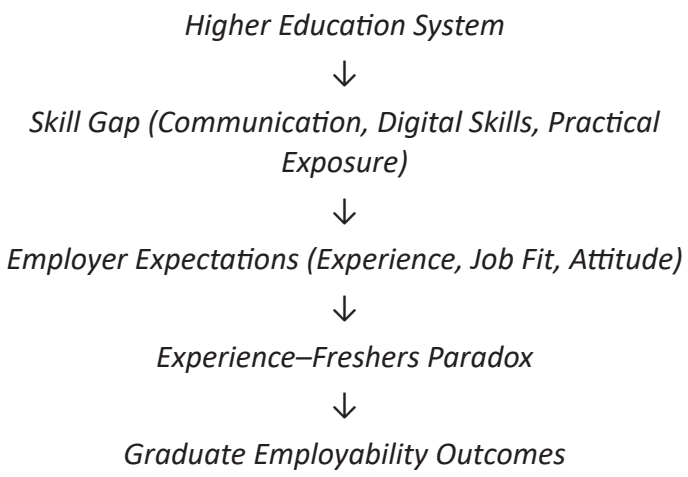

Figure 1: Conceptual Framework of the Experience–Freshers Paradox

The conceptual framework illustrates the structural relationship between higher education outcomes and labor market expectations. While universities primarily focus on delivering theoretical knowledge, employers increasingly demand practical competencies such as communication ability, digital literacy, and industry exposure. This mismatch creates a skill gap between academic preparation and workplace requirements. Consequently, employers often prefer candidates with prior work experience even for entry-level roles, resulting in what this study conceptualizes as the "Experience–Freshers Paradox." This paradox creates barriers for fresh graduates entering the labor market and affects overall employability outcomes.

Objectives of the Study

- To examine the challenges fresh graduates face in securing their first job.
- To identify the skill gap between students and employer expectations.

RESEARCH METHOD

The present study is descriptive in nature, aiming to analyse and interpret the employability gap between fresh graduates and employer expectations. The study is primarily based on primary data. The data has been collected directly from the respondents through structured questionnaires designed to capture relevant insights regarding employability skills, expectations, and industry requirements. The primary data was collected from two groups of respondents: freshers (students) and employers. These respondents were selected to provide a balanced perspective on the existing employability gap. A total of 250 respondents were initially approached, comprising 125 students and 125 employers. However, only 103 complete responses were received and considered for the final analysis. This includes 67 students and 36 employers. Therefore, the response rate being 41.20% (Tables 1 and 2).

The study adopts a non-probability sampling technique, specifically purposive sampling, where respondents were selected based on their relevance to the research objectives. The sample size for the study consists of 67 fresher students and 36 employers. The student respondents were selected from AICTE-approved government university departments, including:

- University of Burdwan
- University of North Bengal (NBU)
- Vidyasagar University

These institutions were chosen to ensure representation from recognized higher education bodies and to enhance the reliability of the findings.

Table 1: List of Employer Respondents (n = 36)

Company Name	Total Respondents	Seniority Level
Durgapur Steel Plant (SAIL)	4	HR Manager / Senior Manager
Satin Credit care Network Limited	3	Area Manager / HR Executive
Tata Consultancy Services (TCS)	4	HR Business Partner / Team Lead
ITC Limited	2	Assistant Manager HR
Haldia Petrochemicals Limited	2	Deputy Manager
Bandhan Bank	3	Branch Manager / HR Officer
Coal India Limited (ECL)	2	Personnel Manager
Webel IT Park	1	HR Executive
Emami Limited	2	Assistant Manager
Berger Paints India Ltd.	2	Area HR Manager
Shyam Steel Industries Ltd.	1	HR Executive
DVC (Damodar Valley Corporation)	2	Senior HR Officer
Tech Mahindra	2	Team Lead / Project Manager
Wipro Limited	2	HR Executive
Infosys Limited	2	HR Associate

Table 2: List of Student Respondents from AICTE-Approved Programs (n = 67)

Institution (Affiliated to University)	Sample Size	Program (AICTE-Approved / Aligned)
Department of Business Administration (HR), University of Burdwan	10	MBA (HR) – PG
Burdwan Institute of Management & Computer Science (BIMCS), Burdwan University	6	BBA – UG
ABS Academy of Science, Technology & Management, Burdwan University	5	MBA – PG
Dr. B.C. Roy Engineering College (Management Dept.), Burdwan University	4	MBA – PG
University of Burdwan (Department of Computer Science)	5	MCA – PG
University of Burdwan (Department of Computer Science)	4	MSc (Computer Science) PG
Vidyasagar University Department of Business Administration	6	MBA – PG
Midnapore College (Autonomous, affiliated to Vidyasagar University)	4	BBA – UG
Haldia Institute of Technology (Management/IT Dept.)	5	MCA – PG
Vidyasagar University (Department of Computer Science)	4	MSc (Computer Science) PG
University of North Bengal (NBU) Department of Management	6	MBA – PG
Siliguri Institute of Technology (Management/IT Dept.), NBU region	4	MCA – PG
Salesian College, Siliguri (Affiliated to NBU)	4	BBA – UG

RESULTS

The analysis of responses collected from 67 student respondents reveals that fresh graduates face multiple challenges in securing their first employment opportunity. The findings indicate that deficiencies in both technical and soft skills significantly affect employability (Table 3).

Table 3: Analysis of Challenges Faced by Fresh Graduates (Objective 1)

Challenge Dimension	Description of Challenge	Mean Score (Students)	Severity Level
Communication Barrier	Difficulty in professional communication, interviews, and workplace interaction	3.10	Moderate
Problem-Solving Difficulty	Lack of practical exposure to solve real-world business problems	2.95	High
Inadequate Technical/Domain Knowledge	Limited industry-relevant and application-based knowledge	3.25	Moderate
Teamwork & Collaboration Issues	Limited experience in working in professional teams and cross-functional groups	3.40	Moderate
Digital Skill Deficiency	Lack of exposure to digital tools, analytics, and modern technologies	3.35	Moderate
Low Adaptability	Difficulty in adjusting to dynamic work environments and learning new skills quickly	3.05	High
Weak Professional Ethics & Work Readiness	Lack of understanding of workplace discipline, responsibility, and professionalism	3.20	Moderate
Lack of Critical Thinking	Inability to analyse situations and make strategic decisions	2.85	High

Among the identified challenges, problem-solving ability (Mean = 2.95) and lack of critical thinking (Mean = 2.85) are perceived as highly severe issues. This suggests that students often struggle to apply theoretical knowledge to practical business situations, reflecting inadequate exposure to real-world problem-solving environments. Additionally, adaptability (Mean = 3.05) is also rated as a high-severity challenge, indicating that graduates find it difficult to adjust to dynamic workplace conditions and evolving job requirements. This highlights the need for greater emphasis on experiential learning and continuous skill development within academic programs.

Other challenges such as communication barriers (Mean = 3.10), technical knowledge gaps (Mean = 3.25), teamwork limitations (Mean = 3.40), and digital skill deficiencies (Mean = 3.35) are rated at moderate levels. While students possess foundational knowledge in these areas, they lack the professional competence required for workplace application. Furthermore, professional work ethics (Mean = 3.20) also emerged as a moderate concern, suggesting that graduates may not be fully prepared for organizational expectations in terms of discipline, responsibility, and professional behaviour. Overall, the findings indicate that the employability challenges faced by fresh graduates are multidimensional, encompassing both cognitive and behavioural competencies (Table 4).

The comparative analysis between student self-assessment and employer expectations highlights a

Table 4: Analysis of Skill Gap Between Students and Employers (Objective 2)

Skill Dimension	Observed Level (Students Mean, n=67)	Expected Level (Employers Mean, n=36)	Skill Gap
Communication Skills	3.10	4.45	1.35
Problem Solving Ability	2.95	4.30	1.35

Skill Dimension	Observed Level (Students Mean, n=67)	Expected Level (Employers Mean, n=36)	Skill Gap
Technical/Domain Knowledge	3.25	4.20	0.95
Teamwork & Collaboration	3.40	4.10	0.70
Digital Literacy	3.35	4.00	0.65
Adaptability & Learning Ability	3.05	4.15	1.10
Professional Work Ethics	3.20	4.25	1.05
Critical Thinking	2.85	4.18	1.33

significant gap across all key employability skills. The largest gaps are observed in:

Communication Skills (Gap = 1.35)
Problem-Solving Ability (Gap = 1.35)
Critical Thinking (Gap = 1.33)

These findings indicate that employers place significantly higher importance on these competencies compared to the level at which students currently possess them. This mismatch reflects a fundamental disconnect between academic training and industry requirements. Similarly, notable gaps exist in:

Adaptability (Gap = 1.10)

Professional Work Ethics (Gap = 1.05)

These results suggest that employers expect graduates to be more flexible, proactive, and professionally oriented than they currently are. Moderate gaps are observed in:

Technical/Domain Knowledge (Gap = 0.95)

Teamwork (Gap = 0.70)

Digital Literacy (Gap = 0.65)

Although these gaps are relatively smaller, they still indicate that students are not fully aligned with industry expectations. The findings clearly demonstrate that employers prioritize practical competencies and job readiness, whereas students tend to possess more theoretical knowledge with limited practical application. This imbalance reinforces the existence of the Experience–Freshers Paradox, where employers hesitate to recruit fresh graduates due to perceived skill deficiencies.

DISCUSSION

The findings of this study strongly support existing literature on employability and skill mismatch in the labor market. The significant gap identified in communication, problem-solving, and critical thinking skills aligns with the work of Jackson (2016) and Andrews & Higson (2008), who emphasize the importance of transferable skills in enhancing graduate employability. The results also validate the argument of Cappelli (2015), who highlighted the increasing tendency of employers to demand work-ready candidates, even for entry-level roles. This expectation contributes directly to the Experience–Freshers Paradox, as graduates are required to possess prior experience before being given employment opportunities. Furthermore, the findings are consistent with Yorke (2006), who argued that employability extends beyond academic achievement and includes attributes such as adaptability, self-management, and professional attitude. The observed gaps in adaptability and work ethics reinforce the need for holistic skill development in higher education.

The study also supports the human capital theory proposed by Becker (1962), which suggests that employers prefer candidates who require minimal training investment. This explains the preference for experienced candidates, as organizations aim to reduce training costs and enhance productivity. Additionally, the results align with Mishra & Sharma (2022), who emphasized the growing importance of digital and cognitive skills in the context of Industry 4.0. Although digital literacy gaps are relatively

smaller, they remain significant in a rapidly evolving technological environment. Overall, the discussion highlights that the employability gap is not merely a result of skill deficiency but a structural issue arising from misalignment between education systems and labor market expectations.

To sum up, the major findings are as under:

- A significant gap exists between student competencies and employer expectations.
- Communication, problem-solving, and critical thinking show the highest gaps.
- Employers prioritize practical skills and job readiness over theoretical knowledge.
- Fresh graduates lack adaptability and professional work ethics.
- Academic institutions focus more on theoretical learning than practical exposure.
- The Experience–Freshers Paradox creates structural barriers to employment.

CONCLUSION

The study concludes that the employability gap in India is primarily driven by the mismatch between academic preparation and industry expectations. Despite the increasing number of graduates, many lack the practical skills and competencies required for effective workplace performance. The Experience–Freshers Paradox further intensifies this challenge by creating a cycle where graduates are unable to gain employment due to lack of experience, while employers hesitate to hire inexperienced candidates. This structural issue not only affects individual career growth but also impacts organizational efficiency and labor market productivity. Addressing this gap requires a collaborative approach involving educational institutions, industry stakeholders, and policymakers. Enhancing employability is essential for ensuring sustainable workforce development and economic growth in the evolving labor market.

RECOMMENDATIONS

Integrate mandatory internships and live projects into academic curricula:

- Strengthen industry–academia collaboration.
- Introduce skill-based and competency-driven education models.
- Enhance digital literacy and analytical skill training.
- Conduct soft skill development programs focusing on communication and problem-solving.
- Promote experiential learning approaches such as case studies and simulations.

LIMITATIONS

- The study is based on a relatively small sample size (103 respondents).
- The research is limited to selected universities in India.
- Data is based on self-reported responses, which may involve bias.
- The study adopts a cross-sectional approach and does not capture changes over time.

SCOPE FOR FUTURE RESEARCH

- Conduct studies with larger and more diverse samples.
- Perform sector-specific employability analysis.
- Explore longitudinal studies to track employability over time.
- Examine the impact of policy interventions such as NEP 2020.

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Impact of Knowledge Management on Employee Performance in Banks: An Exploratory Research

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ABSTRACT

Knowledge is a critical organizational resource in today's competitive and rapidly changing environment. Effective Knowledge Management (KM) enables employees to access, share, and apply information efficiently, enhancing their skills, decision-making, and overall performance. KM also fosters innovation, collaboration, and organizational learning, driving sustainable growth and competitive advantage. The present study aims to examine the impact of Knowledge Management on employee performance in public and private sector banks in India. A total of 390 employees from both sectors were surveyed through a structured questionnaire to collect primary data. The findings are expected to provide insights into how KM practices influence employee performance in different banking contexts. This study also contributes to understanding whether variations exist between the two sectors in terms of employee perceptions. The results are anticipated to be of value to bank management, policymakers, and researchers by highlighting the role of KM in enhancing employee productivity and organizational effectiveness.

KEYWORDS

Innovation, Knowledge Worker, Organizational Effectiveness, Private Sector Banks, Public sector Banks

INTRODUCTION

Banks are the lifeline of an economy and serve as the backbone of business activities. The banking sector plays a vital role in ensuring economic growth and financial stability. As a knowledge-intensive industry, banking and financial services act as a key driver of innovation and transformation. To remain competitive, banks must create an environment that supports transparent sharing of information, nurtures an appropriate organizational culture, and leverages technology to facilitate this process. In the present decade, the sector requires an effective combination of creativity, knowledge, leadership, and scholarly capability to generate innovation in operations and the work environment. Both public sector and private sector banks are increasingly adopting technology-driven services to meet changing customer expectations. The trend of digital banking, which accelerated after the COVID-19 pandemic, continues to expand at a rapid pace.

Banks are progressively implementing KM systems to strengthen their strategies and improve performance (Zack, McKeen & Singh, 2009). To meet customer expectations, they are focusing on innovation in products and services, redesigning business models, and upgrading delivery channels. These initiatives aim to enhance customer satisfaction and support business growth. Banks have begun to acknowledge that knowledge significantly influences organizational development, growth, and performance (Cebi, Aydin & Gozlu, 2010). Knowledge is now widely recognized as a critical organizational resource that provides competitive advantage. In this context, Information Technology (IT) serves as a crucial enabler of KM

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in the banking sector. Through the adoption of emerging technologies, banks can manage, utilize, and optimize their information and knowledge assets more effectively, thereby enhancing overall performance and resilience.

Concept of Knowledge Management

Knowledge Management is a dynamic and evolving concept that has gained prominence in modern organizations. It is generally described as the systematic process of capturing, creating, managing, disseminating, storing, and applying knowledge across the organization to enhance efficiency and competitiveness. The collective knowledge residing in employees, customers, and suppliers is considered a vital organizational resource, as it directly contributes to growth, innovation, and performance. The purpose of KM is to connect people with information and with one another to strengthen the organization's competitive advantage.

Peter Drucker (1995) highlighted the significance of knowledge by emphasizing that it has surpassed traditional factors of production such as land, labor, and capital in importance. Dalkir (2013) defines KM as a deliberate and coordinated effort by organizations to integrate people, processes, technology, and structure in order to generate value through innovation and knowledge reuse. Similarly, Nonaka (1991) and Tiwana (2008) describe KM as a recognized managerial approach that focuses on acquiring, sharing, storing, and utilizing organizational knowledge in the most systematic and effective manner.

Effective KM requires a supportive organizational culture, visionary leadership, advanced technological infrastructure, and continuous evaluation systems. When these elements are in place, KM practices enable employees to perform better, foster collaboration, and improve decision-making. In the context of banking, where information and knowledge play a critical role in customer service, risk management, and product innovation, KM acts as a strategic tool. Strong KM processes not only enhance employee performance but also strengthen the overall performance and sustainability of banks.

Importance of Knowledge Management in Banks

The banking industry has undergone rapid transformation with the onset of liberalization, privatization, globalization, and the continuous advancement of information technology. These changes have created extraordinary developments in the business environment, compelling banks to operate in a highly competitive and dynamic marketplace. To sustain in this environment, banks must remain prepared to face new challenges arising from competition, regulatory changes, customer expectations, and technological disruptions. In such a context, performance management and organizational effectiveness become critical. High performance is not only a driver of growth but also a key condition for survival in the banking sector. Banks strive for excellence in performance to achieve business expansion, enhance profitability, improve cost efficiency, and deliver superior service quality. Achieving these objectives requires systematic KM, which enables the integration of information, employee expertise, and technology into the strategic framework of the organization.

Knowledge Management plays a vital role in banking because it ensures that the collective knowledge of employees and systems is captured, shared, and applied effectively. It provides managers with accurate, relevant, and timely information that supports sound decision-making. With the rise of digital technologies and fintech innovations, decision-making is increasingly data-driven, requiring banks to rely on robust KM practices for accuracy and efficiency. *KM is often referred to as a value-adding system since its core objective is to deliver the right knowledge to the right people at the right time*. This process facilitates informed decisions, supports innovation, and drives business growth. Furthermore, KM contributes to employee development by enabling staff to realize their full potential. In the present banking scenario, the principle of "building people to build the organization, to build the business" is well

established, and knowledge management serves as the foundation for realizing this vision.

Necessity of Knowledgeable Workers in the Banking Sector

The term "knowledge worker" was first introduced by Peter Drucker (1959) in his influential work *The Landmarks of Tomorrow*. He described knowledge workers as employees with advanced analytical and theoretical expertise, acquired primarily through formal education and training, who are responsible for generating new products, services, and ideas. Drucker also predicted that such employees would become the most valuable assets of organizations in the 21st century due to their capacity for innovation, creativity, and productivity. His observation has proven particularly relevant for the banking sector, where knowledge-driven functions dominate operational and strategic activities.

Banking has long evolved from its traditional role of accepting deposits and providing loans to generate income from spreads. In today's competitive and technology-driven environment, banks have diversified into a wide spectrum of financial and non-financial services. These include para-banking activities, universal banking, portfolio management, foreign exchange operations, insurance (life and non-life), capital and commodity markets, bullion trading, wealth management, advisory services, digital banking, and risk management. Banks are also financing infrastructure and turnkey projects, which demand sophisticated risk assessment skills. Each of these functions requires specialized knowledge, advanced analytical ability, and continuous upgradation of professional competencies.

In recent years, banking has witnessed a shift toward specialized business models and service offerings. The rise of fintech firms, digital platforms, and new-age customer demands has accelerated the need for professionals with niche expertise. Unlike the earlier manpower-intensive model, future banking will rely less on large pools of generalist employees and more on specialists capable of delivering high-value services. With increasing automation of routine and repetitive activities, significant portions of the workforce are being redeployed into advisory roles, technology design, credit assessment, business analytics, and customer relationship management. Consequently, recruitment strategies are moving toward hiring skilled professionals rather than broad-based generalists.

This transition also emphasizes the need for rethinking leadership competencies. Future banking leaders must possess not only financial acumen but also agility, digital literacy, and the ability to manage innovation-driven teams. The emergence of technology firms offering traditional financial services further challenges banks to develop visionary leadership that can integrate banking expertise with technological solutions. In this dynamic environment, banks must equip employees with the capability to assess and process complex risks, make informed decisions, and adapt to fast-changing customer expectations. Success will increasingly depend on building employee imagination, creativity, and problem-solving abilities. Banks that develop robust digital ecosystems alongside conventional multichannel services are more likely to sustain competitive advantage.

Furthermore, the adoption of analytics and artificial intelligence (AI) in banking creates additional skill requirements. Employees need to acquire new knowledge in data analysis, AI literacy, and digital tools to support evidence-based decision-making. At the organizational level, this demands investment in continuous training, strategic workforce planning, and new models of performance management. In short, the future of banking depends on cultivating a pool of knowledgeable, skilled, and adaptable employees. Skilled human capital is critical for banks. It improves efficiency and supports innovation. It also helps banks stay resilient, customer-focused, and competitive in a period of rapid technological and market change.

REVIEW OF LITERATURE

It has been observed that disseminating knowledge effectively among employees requires accelerating

knowledge creation and acquisition while institutionalizing communication flow from top management (Rao, 2017). Proper coordination among technology, processes, and people—the three pillars of KM—is also vital for success (Rao, 2017). A favorable relationship exists between KM and employee performance, and the support of top management plays a crucial role in fostering a vibrant organizational culture that encourages knowledge sharing (Tajali & Baharvand, 2014). The KM process, which involves acquiring, organizing, and applying knowledge, has been shown to positively impact employee satisfaction, thereby enhancing both individual and organizational performance (Khanal & Poudel, 2017). Similarly, creating an environment that facilitates information exchange enriches the knowledge base of employees (Torabi, Kyani, & Falakinia, 2016).

Studies also demonstrate that KM activities have a positive relationship with employee performance (Akram & Abdullah, 2018), and KM has emerged as a predominant tool to enhance employee knowledge and capability (Suresh & Anusha, 2017). The implementation of KM practices has been found to contribute significantly to employee job performance, establishing a favorable causal link between the two (Biswakarma, 2018). Supporting this, scholars emphasize the importance of nurturing human capital and argue that knowledge must be systematically gathered, combined, organized, transmitted, and utilized with urgency to improve both individual and organizational performance (Singh, Sidhu, Joshi, & Kansal, 2016). Furthermore, employee performance is critical for organizational survival and sustaining excellence in competitive environments (Lee & Carter, 2011).

The impact of KM on organizational outcomes has been widely recognized in the banking sector. KM practices, such as knowledge creation, acquisition, storage, sharing, and application, positively influence employee satisfaction and engagement (Kumar, 2018). A strong link also exists between organizational learning, KM, and employee satisfaction, emphasizing the need for a learning culture and accessible knowledge resources to enhance skills and motivation (Singh & Sharma, 2011). The experimental implementation of KM at ICICI Bank highlighted that top management support and employee involvement were critical for successful adoption and growth of KM initiatives (Goswami, 2008).

Comparisons between private and public sector banks reveal that private banks perform better in human capital efficiency due to training, process improvements, and competitive compensation, although public banks are gradually improving (Sharma & Mani, 2012). Effective management of knowledge workers requires empowerment, structured training, and systematic knowledge dissemination, as hierarchical structures and lack of skill development can limit the benefits of KM (Pathak, 2009). Furthermore, KM enhances organizational productivity and employee performance by promoting knowledge sharing, which strengthens employees' skills and improves organizational responsiveness (Zargar & Rezaee, 2014).

Collectively, these studies highlight that effective KM positively influences employee performance, which ultimately enhances organizational growth and sustainability.

RESEARCH METHOD

The objective of this study is to understand the impact of KM on employee performance in selected public and private sector banks in India.

This study is a component of conclusive research, which the researcher does following the conclusion of exploratory research. The researcher chose this strategy to fulfil the study objectives using statistical tools and techniques. The present study applied t-test to understand whether there exists any significant difference of opinion among the employees of the public and private sector banks.

Type of Data: This research employed both primary and secondary data. Primary data were collected by using a structured questionnaire. For secondary data, Journals and websites were referred to gain

information related to KM practices in the banking sector in India.

Target Respondents: The data were collected from only those employees who were having at least 3 years of work experience in the said banks. The respondents were identified from the five public sector and five private sector banks. A total of 390 responses were collected from these banks, out of which 212 responses were from public sector banks and 178 responses were from private sector banks. In this study, the researcher initially applied convenience sampling technique to identify the study units. Once the study units were identified, the researcher applied simple random sampling to collect the information from them.

Reliability: The internal consistency of the variables is measured by reliability. Although there are other ways for measuring internal reliability, the researcher chose to employ Cronbach's alpha in this situation. Internal consistency may be determined if the alpha value is greater than 0.70 (Table 1).

Table 1: Cronbach Alpha Result

Reliability Statistics

Cronbach's Alpha	N of Items
.813	30

The result shows that the alpha value is 0.813 which is significantly higher than the threshold limit of 0.70. Based on this, it can be concluded that the variables are internally consistent and hence can be used for further analysis.

Validity: It is required to establish whether the data is useful to evaluate the variables' validity. In research, we often use the factor analysis approach to discover factors that are important to the current topic. However, to determine whether factor analysis is practicable, the researcher needs to do the KMO and Bartlett's test. The KMO test assesses if the sample size is large enough to do factor analysis. If the value of KMO is more than 0.70, then the sample respondents have been identified for the research (Table 2).

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.746
Bartlett's Test of Sphericity	Approx. Chi-Square	1353.013
df		435
Significance		.000

The sample size is adequate to do the factor analysis because the KMO value is 0.746, which is greater than the permitted limit. The finding is further validated by Bartlett's sphericity test, which is significant. The discussion on factor analysis is conducted subsequently to identify the right variables for this research.

Impact of KM on Employee Performance (Fig. 1)

Variable 1: Knowledge management helps the employees' performance to a great extent.

Variable 2: Knowledge management helps to improve attitudes and contributes towards organizational goals.

Variable 3: Knowledge management helps in employees' productivity.

Variable 4: Knowledge management helps to understand the designated tasks and clarity of objectives.

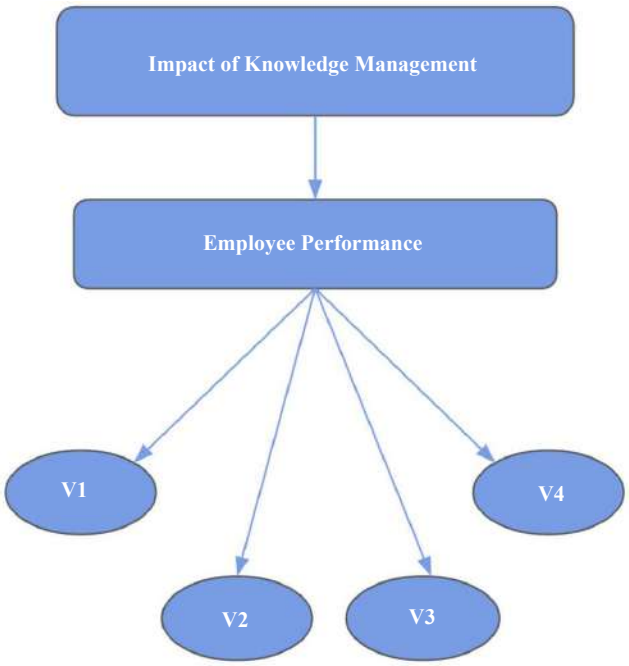

Figure 1: Conceptual Model Related to Impact of KM on Employee Performance

(Conceptual Model based on Review of Literature and a subsequent pilot study)

Application of Statistical Tools: This study used both descriptive as well as inferential statistical tools to analyze the data. Factor analysis was performed to discover the set of variables that are important to this investigation. Subsequently, the t-test was used to analyze the hypotheses developed during the study. SPSS 25 was used for data tabulation, cleaning, and analysis purposes.

RESULTS AND DISCUSSION

Hypothesis (H I): There exists a significant difference of opinion among the target respondents of the public as well as the private sector banks related to the impact of KM on employee performance.

This hypothesis is analyzed with the help of 4 sub-hypotheses.

Sub-Hypothesis 1

H1a: Opinion matches among employees of public and private sector banks that KM helps the employees' performance to a great extent.

H1b: Opinion does not match among employees of public and private sector banks that KM helps the employees' performance to a great extent.

Table 3a: Group Statistics Related to Sub-Hypothesis 1

Organization	N	Mean	Standard Deviation
Public sector Bank	212	3.81	.931
Private Sector Bank	178	4.12	.839

Table 3b: T-Statistics Related to Sub-Hypothesis 1

Statement Equality of Variances (Levene's Test)			t-test for Equality of Means	
Statement	F	Sig.	t	Sig (2 - tailed)
Equal Variances Assumed	.592	.442	-3.440	.001
Equal Variances not Assumed			-3.472	.001

Observation: Both Tables 3a and 3b show the results associated with sub-hypothesis 1. To judge the hypothesis, one should check 3b table first. Here, Levene's test result shows the result is insignificant as significant value is more than 5% level of significance. Hence, to test sub-hypothesis 1, one should look at first row where equal variance assumed is located. The null hypothesis is rejected and this shows opinion does not match among employees of public and private sector banks that KM helps the employees' performance to a great extent.

Sub-Hypothesis 2

H2a: Opinion matches among employees of public and private sector banks that KM helps to improve attitudes and contributes towards organizational goals.

H2b: Opinion does not match among employees of public and private sector banks that KM helps to improve attitudes and contributes towards organizational goals.

Table 4a: Group Statistics Related to Sub-Hypothesis 2

Organization	N	Mean	Standard Deviation
Public sector Bank	212	3.79	.910
Private Sector Bank	178	4.06	.855

Table 4b: T Statistics Related to Sub-Hypothesis 2

Statement Equality of Variances (Levene's Test)			t-test for Equality of Means	
Statement	F	Sig.	t	Sig (2-tailed)
Equal Variances Assumed	.742	.390	-2.929	.004
Equal Variances not Assumed			-2.945	.003

Observation: Both Tables 4a and 4b show the results associated with sub-hypothesis 2. To judge the hypothesis, one should check Table 4b first. Here, Levene's test result shows the result is insignificant as significant value is more than 5% level of significance. Hence, to test sub-hypothesis 2, one should look at first row where equal variance assumed is located. The null hypothesis is rejected and this shows opinion does not match among employees of public

and private sector banks that KM helps to improve attitudes and contributes towards organizational goals.

Sub-Hypothesis 3

H3a: Opinion matches among employees of public and private sector banks that KM helps in employees' productivity.

H3b: Opinion does not match among employees of public and private sector banks that KM helps in employees' productivity.

Table 5a: Group Statistics Related to Sub-Hypothesis 3

Organization	N	Mean	Standard Deviation
Public sector Bank	212	3.51	1.174
Private Sector Bank	178	3.88	1.032

Table 5b: t Statistics Related to Sub-Hypothesis 3

Statement Equality of Variances (Levene's Test)			the t-test for Equality of Means	
Statement	F	Sig.	t	Sig (2-tailed)
Equal Variances Assumed	15.474	.000	-3.297	.001
Equal Variances are not Assumed			-3.334	.001

Observation: Both Tables 5a and 5b show the results associated with sub-hypothesis 3. To judge the hypothesis, one should check Table 5b first. Here, Levene's test result shows the result is significant as significant value is less than 5% level of significance. Hence, to test sub-hypothesis 3, one should look at second row where equal variance not assumed is located. The null hypothesis is rejected and this shows opinion does not match among employees of public and private sector banks that KM helps in employees' productivity.

Sub-Hypothesis 4

H4a: Opinion matches among employees of public and private sector banks that KM helps to understand the designated tasks and clarity of objectives.

H4b: Opinion does not match among employees of public and private sector banks that KM helps to understand the designated tasks and clarity of objectives.

Table 6a: Group Statistics Related to Sub-Hypothesis 4

Organization	N	Mean	Standard Deviation
Public sector Bank	212	3.58	1.188
Private Sector Bank	178	3.81	1.060

Table 6b: t Statistics Related to Sub-Hypothesis 4

Statement Equality of Variances (Levene's Test)			the t-test for Equality of Means	
Statement	F	Sig.	t	Sig (2-tailed)
Equal Variances Assumed	9.996	. 002	-2.038	.042
Equal Variances are not Assumed			-2.059	.040

Observation: Both tables 6a and 6b show the results associated with sub-hypothesis 4. To judge the hypothesis, one should check Table 6b first. Here, Levene's test result shows the result is significant as significant value is less than 5% level of significance. Hence, to test sub-hypothesis 4, one should look at second row where equal variance not assumed is located. The null hypothesis is rejected and this shows opinion does not match among employees of public and private sector banks that KM helps to understand the designated tasks and clarity of objectives.

The findings of the study highlight the varying perceptions of employees in public and private sector banks regarding the role of KM in enhancing performance. Tables 3a and 3b present results related to Sub-Hypothesis 1. The t-significant value was found to be less than the 5% level of significance, which led to the rejection of the null hypothesis. This indicates that opinions of employees from public and private sector banks differ regarding the extent to which KM improves employee performance. The mean value shows that respondents from private sector banks strongly agree that KM practices contribute substantially to individual performance. This reflects the proactive adoption of KM systems in private banks, where technology-driven platforms

and customer-centric approaches are more widely implemented.

Tables 4a and 4b show findings related to Sub-Hypothesis 2. Again, the t-significant value was below the 5% threshold, leading to rejection of the null hypothesis. This result indicates significant differences in perception regarding the role of KM in improving employee attitudes and aligning them with organizational goals. The mean score suggests that private sector employees are more inclined to believe that KM fosters positive work attitudes and enhances organizational alignment. This may be due to their exposure to performance-linked systems, structured training, and knowledge-sharing cultures.

Tables 5a and 5b present the respondents' opinions on Hypothesis 3. The t-test result shows that the significance value is below the 5% level, leading to the rejection of the null hypothesis. This means that employees of public and private sector banks hold different views about the role of KM in improving employee productivity. Table 5a further confirms that there is a significant difference in opinions between the two groups. The mean values indicate that employees from private sector banks agree more strongly that KM contributes to higher productivity than those from public sector banks This finding suggests that KM initiatives, such as digital learning, best practice sharing, and data-driven decision-making, are more actively integrated into the workflow of private banks, thereby raising productivity levels.

Tables 6a and 6b deal with Sub-Hypothesis 4. The t-test result shows that the significance value is below the 5% level, leading to the rejection of the null hypothesis. This indicates that employees from public and private sector banks hold different opinions regarding the role of KM in understanding designated tasks and achieving clarity of objectives. Table 6a further shows a significant difference in opinions among the respondents. The mean values indicate that private sector respondents are more convinced that KM enhances clarity in task performance and helps employees better understand designated objectives. This outcome reflects the structured goal-setting, advanced IT systems, and robust communication mechanisms often seen in private banks.

Overall, the analysis establishes that KM has a positive impact on employee performance dimensions such as efficiency, productivity, attitude, and clarity of objectives. However, private sector employees perceive these benefits more strongly, which may be attributed to better integration of KM practices into their organizational culture and technology-driven processes. These findings reinforce the importance of strengthening KM practices in public sector banks to bridge the perceptual gap and realize greater performance outcomes.

SUGGESTIONS

The study highlights that KM positively influences employee performance, organizational competitiveness, and innovation, thereby improving overall productivity. Its effectiveness depends largely on employees' willingness to share knowledge and the strength of the knowledge-sharing culture. However, many banks face challenges in effectively using KM technologies and integrating them into daily operations.

For KM to succeed, banks must create a supportive and collaborative culture that motivates employees to share and apply knowledge. This requires not only suitable systems and tools but also a change in mindset and behavior. A true learning culture develops when employees value openness, trust, and collective learning.

Employee willingness to share knowledge streamlines processes, reduces duplication, and improves decision-making. KM cannot depend on technology alone; it must be reinforced by trust, recognition, and leadership support. A strong culture, robust infrastructure, digital tools, and active leadership commitment together enhance knowledge flow and organizational excellence.

Policy Recommendations

Effective KM is a critical driver of employee performance, organizational innovation, and competitiveness in the banking sector. Based on the study findings, the following policy recommendations are suggested to ensure successful implementation of KM practices and to optimize employee and organizational outcomes:

Foster a Knowledge-Sharing Culture: Banks should institutionalize a culture that encourages open communication, collaboration, and knowledge sharing. Recognition programs, incentives, and reward systems can motivate employees to actively contribute their expertise.

Invest in Advanced KM Technologies and Infrastructure: Adoption of digital platforms, collaborative tools, AI-enabled knowledge repositories, and cloud-based systems will facilitate real-time access, storage, and dissemination of organizational knowledge.

Integrate KM into Training and Development Programs: Regular training modules should enhance both technical knowledge and knowledge-sharing capabilities, enabling employees to leverage organizational knowledge effectively.

Link KM Contributions to Performance Appraisals: Employee evaluations should include participation in knowledge-sharing initiatives, mentoring, and innovation activities to align individual performance with organizational KM goals.

Ensure Leadership Engagement and Commitment: Top management should actively support KM initiatives, participate in knowledge forums, and model knowledge-sharing behavior to reinforce a learning-oriented organizational culture.

Promote Cross-Departmental Collaboration: Structured inter-departmental projects and forums can enhance coordination, reduce duplication of effort, and foster comprehensive understanding of organizational processes.

Encourage Continuous Learning and Skill Upgradation: Banks should implement ongoing development programs, especially in digital literacy, analytics, and emerging financial technologies, to maintain workforce readiness for evolving industry requirements.

Standardize Knowledge Documentation and Communication: Systematic classification, storage, and dissemination of knowledge improve task clarity, reduces errors, and ensures information is easily accessible across all levels.

Monitor and Evaluate KM Effectiveness: Regular assessment of KM initiatives through key performance indicators (KPIs) such as employee engagement, process improvement, and innovation output can guide continuous improvement.

Leverage Customer Knowledge for Innovation: Banks should collect, analyze, and integrate customer insights into KM systems to enhance service design, improve satisfaction, and create new value propositions.

IMPLICATIONS

In addition to the above recommendations, banks should invest in *knowledge translation processes* that help convert individual experiences into structured, reusable information. Employees should be encouraged to classify, organize, and communicate knowledge effectively across departments. This enhances clarity of objectives and minimizes operational ambiguity. A forward-looking KM strategy should align knowledge-sharing with business goals. Recognition of active contributors ensures sustained participation and makes KM a strategic asset for organizational excellence.

LIMITATIONS

This study has certain limitations. It focuses on public and private sector banks in Odisha; therefore, the findings may not be generalized to banks in other states. The analysis is based on employees' perceptions, which might have influenced the results. As with any primary data-based research, it

may not be completely free from errors. Although efforts were made to minimize sampling and non-sampling errors, some deviations may still exist. The study also examined only selected dimensions of knowledge management. Future research may explore additional dimensions and assess the impact of KM on both employee performance and customer orientation.

CONCLUSION

The concept of KM is not new; however, few studies have rigorously examined its dynamics and impact in the banking sector. To address this gap, the present study investigated the effect of KM on employee performance in public and private sector banks in India. Specifically, four variables were analyzed: the role of KM in enhancing performance, improving attitudes, increasing productivity, and providing clarity in task execution.

The findings reveal that all alternative hypotheses were accepted, thereby confirming a positive impact of KM on employees. Furthermore, mean values indicate that private sector bank employees perceive KM more favorably than their public sector counterparts. They strongly agree that KM significantly improves performance, fosters positive attitudes, enhances productivity, and clarifies objectives. In public sector banks, employees also recognize these benefits, but their agreement is less strong. This indicates that KM positively influences employee performance in both sectors, though its implementation and perceived effectiveness are more pronounced in private banks. The stronger impact in private banks is often supported by technology, structured knowledge-sharing mechanisms, and performance-oriented cultures.

Moreover, the study underscores KM as a critical tool for developing employee skills and strengthening organizational capability. It enables banks to enhance performance and service quality while supporting continuous learning. Therefore, cultivating a culture of regular knowledge and skill upgrading is essential to meet the challenges of rapidly changing markets and technological advancements. In addition, KM allows banks to deepen their understanding of customers. By systematically collecting, organizing, and analyzing customer information, banks can strengthen engagement and enrich knowledge databases. The insights gained from both employees and customers can be applied to redesign processes, improve services, and create sustainable competitive advantage.

In essence, the success of knowledge-driven organizations fundamentally depends on the effective adoption of KM practices. These practices improve employee performance, strengthen organizational effectiveness, foster innovation, enable informed decision-making, and ensure enduring competitiveness in today's dynamic environment.

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Institutionalization of Panchayati Raj in Jammu and Kashmir: Structural and Political Challenges before Abrogation of Article 370

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ABSTRACT

The institutionalization of Panchayati Raj Institutions (PRIs) in the erstwhile state of Jammu and Kashmir remained weak and inconsistent before the abrogation of Article 370. Unlike other Indian states where the 73rd Constitutional Amendment strengthened democratic decentralization, Jammu and Kashmir continued to operate under a separate Panchayati Raj framework that lacked effective devolution of powers, financial autonomy, and direct elections at all levels. This study critically examines the structural, political, and conflict-related challenges that hindered the growth of grassroots democracy in the region. The study draws upon field surveys, interviews, government reports, and scholarly literature to analyze the functioning of PRIs before and after the constitutional changes of 2019. The findings reveal that Panchayats often functioned under excessive bureaucratic control, while elected representatives possessed limited decision-making authority. Although post-2019 reforms introduced elections to Block Development Councils (BDCs) and District Development Councils (DDCs), several challenges continue to persist, including centralized administration, inadequate financial powers, and security concerns for elected representatives. The paper argues that sustainable grassroots democracy in Jammu and Kashmir requires more than structural reforms.

KEYWORDS

Bureaucratic Dominance, Decentralization, Governance, Grassroots Democracy, Public Grievances

INTRODUCTION

Panchayati Raj Institutions are considered the foundation of democratic decentralization in India. Through these institutions, governance is expected to move closer to the people, ensuring local participation in planning and development. The 73rd Constitutional Amendment Act of 1992 provided constitutional status to Panchayati Raj and established a three-tier structure consisting of village, block, and district-level institutions. However, the erstwhile state of Jammu and Kashmir remained outside the full scope of this constitutional framework due to its special constitutional position under Article 370 (Lone, 2009).

The Panchayati Raj system in Jammu and Kashmir functioned under the Jammu and Kashmir Panchayati Raj Act of 1989. Although the Act introduced a three-tier system, it lacked several democratic provisions found in the 73rd Constitutional Amendment. Direct elections were conducted only at the village level, while block and district bodies remained weak or non-functional for long periods (Mathew, 2013). Excessive bureaucratic intervention, inadequate devolution of powers, financial dependency, and political unwillingness prevented PRIs from becoming genuine institutions of local self-governance (Punjabi, 1990).

The institutionalization of Panchayati Raj in the region was further complicated by the conflict situation

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in Kashmir. Political instability, militancy, targeted attacks on elected representatives, and public distrust severely affected grassroots democracy. Panchayat members often worked under fear and insecurity, while many villagers perceived PRIs as extensions of state control rather than instruments of empowerment (Mathew, 2013). This study examines the structural and political challenges faced by PRIs in Jammu and Kashmir before the abrogation of Article 370. It also evaluates the impact of post-2019 reforms and discusses whether these reforms have addressed the long-standing limitations of local governance in the region.

OBJECTIVES

1. To examine the structural weaknesses of PRIs in Jammu and Kashmir before the abrogation of Article 370.
2. To analyze the impact of political conflict on the institutionalization of grassroots democracy.
3. To study the role of government policies in strengthening or weakening PRIs.
4. To assess public grievances and challenges related to local governance.
5. To evaluate post-2019 developments in Panchayati Raj in Jammu and Kashmir.

RESEARCH METHOD

The study is based on both primary and secondary sources. Primary data was collected from 400 respondents through field surveys and interviews conducted in seven blocks of Anantnag district: Achabal, Breng, Shahabad, Shangus, Khoveripora, Dachnipora, and Qazigund. Twenty-eight villages were selected to understand the functioning of PRIsin different geographical and social contexts. Secondary data was collected from government reports, books, journal articles, policy documents, and research studies related to Panchayati Raj and governance in Jammu and Kashmir. A mixed-method approach was adopted to combine qualitative observations with quantitative findings.

Historical Evolution of Panchayati Raj in Jammu and Kashmir

The roots of Panchayati Raj in Jammu and Kashmir can be traced back to the Dogra period. Early Panchayats mainly assisted the administration in local matters such as sanitation, irrigation, and dispute resolution. However, these institutions largely remained under elite control, and ordinary villagers had limited political participation. After independence, the government introduced reforms through the Panchayati Raj Act of 1951. The Act expanded adult franchise and attempted to promote grassroots participation. However, political instability and administrative centralization limited its implementation. The Panchayati Raj Act of 1958 further aimed to strengthen rural development, but Panchayats continued to function under government dominance (Punjabi, 1990).

A major development occurred in 1989 with the enactment of the Jammu and Kashmir Panchayati Raj Act. The Act introduced a three-tier structure consisting of Halqa Panchayats, BDCs, and District Development Boards. Despite these provisions, the Act lacked many democratic features of the 73rd Constitutional Amendment, including regular elections, financial commissions, and adequate powers for local institutions. The Panchayat elections held in 2001 and 2011 represented attempts to revive local governance. However, these institutions remained weak due to conflict, inadequate powers, and lack of political commitment (Mathew, 2013).

STRUCTURAL PROBLEMS

Bureaucratic Dominance

One of the most serious weaknesses of PRIs in Jammu and Kashmir was excessive bureaucratic control. Government officials exercised authority at every level, while elected representatives had limited decision-making power. Village plans often required approval from block officials, reducing Panchayats to administrative extensions of the state. The absence of elected district and block bodies further strengthened bureaucratic dominance.

Development planning remained centralized, and local institutions lacked autonomy in financial and administrative matters.

Lack of Devolution of Powers

Although Panchayats were expected to function as institutions of self-governance, they were not given adequate authority. Most development schemes continued to be controlled by government departments. Panchayat representatives repeatedly demanded greater powers and implementation of the 73rd Constitutional Amendment (Waza, 2017). Financial dependency was another major issue. Panchayats lacked independent sources of revenue and depended largely on government grants. This restricted their ability to undertake local development according to community needs (Chowdhary, 2001).

Overlapping of Functions

The responsibilities of Panchayats frequently overlapped with those of government departments and field agencies. This created confusion regarding authority and accountability. Village Level Workers, Block Development Officers, and other officials often performed functions similar to those assigned to Panchayats, weakening the effectiveness of grassroots governance.

Poor Infrastructure

The infrastructure available to PRIs remained inadequate. Many Panchayat Ghars were in poor condition and lacked basic facilities such as electricity, sanitation, and office equipment. In several villages, Panchayat buildings remained locked or unused for long periods.

The shortage of staff further reduced administrative efficiency. Village Level Workers were often assigned to multiple villages, making it difficult to address local issues effectively.

Poor Capacity Building

Most elected representatives, especially after the 2011 elections, came from non-political backgrounds. Although the government organized training programs, these programs remained largely theoretical and failed to equip members with practical administrative knowledge. Many Panchayat members lacked awareness about financial management, planning procedures, and legal responsibilities. As a result, local governance remained weak and dependent on bureaucratic guidance.

Gender and Panchayati Raj

The original Panchayati Raj framework in Jammu and Kashmir lacked adequate provisions for women's political participation. A significant change occurred in 2004 when reservations for women were introduced. The 2011 Panchayat elections witnessed increased participation of women at the Panch level, while reservations for Sarpanch seats were later extended (Zoor Baba, 2002). The inclusion of women in local governance produced positive social changes. Many female representatives experienced greater confidence and public visibility after entering politics. However, challenges remained. In many cases, women representatives lacked independent authority and were excluded from important decision-making processes. Social conservatism, lack of political experience, and security concerns also limited the active participation of women in Panchayati Raj Institutions.

Impact of Conflict on Panchayati Raj Institutions

The conflict in Kashmir significantly affected the functioning of PRIs. Militancy, political instability, and violence created an atmosphere of fear that discouraged participation in local governance. The Panchayat elections of 2001 faced low voter turnout and large-scale boycotts. Many constituencies remained vacant due to threats from militant groups. Although the 2011 elections witnessed higher participation, several elected representatives were later assassinated, leading to widespread resignations. Many Panchayat members concealed their identities or avoided public activities due to fear of attacks. Some representatives temporarily left their villages after elections. The insecurity surrounding local governance prevented Panchayats from functioning effectively.

Public distrust further weakened these institutions. In many villages, Panchayats were viewed not as democratic bodies but as instruments of state surveillance. This negative perception limited community participation and weakened accountability. The conflict also affected the functioning of Gram Sabhas. Meetings were often irregular and poorly attended. In several cases, influential groups dominated local decision-making while ordinary villagers remained excluded.

Corruption and Public Grievances

The study revealed widespread dissatisfaction regarding the functioning of PRIs. Corruption and financial mismanagement emerged as major concerns. Development funds were frequently misused, resulting in poor-quality construction works and incomplete projects. Respondents reported irregularities in schemes such as MGNREGA and Swachh Bharat Mission. Beneficiary selection was often influenced by favoritism and political connections. The absence of transparency and accountability further damaged public trust. Gram Sabha meetings were either not conducted regularly or held without proper public notice. As a result, villagers remained unaware of development plans and financial decisions.

Groupism also affected local governance. In many villages, small networks involving contractors, officials, and influential persons controlled development activities. Common villagers had little role in planning and implementation. Despite these problems, PRIs contributed to certain developmental improvements, including the construction of roads, irrigation channels, bunds, and community infrastructure.

Post-Article 370 Reforms and Panchayati Raj

The abrogation of Article 370 in 2019 marked a major political and administrative shift in Jammu and Kashmir. Following the reorganization of the state into a Union Territory, the government introduced several reforms in PRIs. For the first time, elections were conducted for BDCs and District Development Councils, completing the three-tier structure of local governance. The elections witnessed significant participation, particularly in rural areas.

The administration also transferred several subjects to Panchayats and increased financial allocations for local development. Panchayat infrastructure was improved through the construction and renovation of Panchayat Ghars. Recruitment of Panchayat secretaries and accounts assistants aimed to strengthen administrative capacity. However, despite these reforms, many challenges persisted. Bureaucratic dominance continued to limit the autonomy of elected representatives. Decision-making powers remained concentrated with higher administrative authorities. Security concerns also remained serious. Several elected representatives were targeted by militants even after the constitutional changes. In response, some representatives were relocated to protected accommodations, which created additional public criticism (Chowdhary, 2001).

Studies conducted after 2019 indicate that Panchayats still face limitations in financial independence and administrative authority. Delays in elections and continued centralization have further weakened grassroots democracy. The experience of Panchayati Raj in Jammu and Kashmir demonstrates the limitations of decentralization without genuine political commitment. Although laws and elections created the appearance of democratic governance, local institutions remained structurally dependent on the state (The Hindu, 2023).

The conflict situation further complicated the institutionalization process. Violence and insecurity discouraged participation and undermined public trust. As a result, Panchayati Raj Institutions struggled to emerge as effective instruments of participatory democracy. The post-2019 reforms introduced important structural changes, particularly through the establishment of elected BDCs and DDCs. However, institutional transformation requires more than elections. Genuine decentralization depends upon financial autonomy, administrative independence, transparency, and active community participation. Without addressing these deeper structural and

political issues, PRIs risk functioning merely as administrative mechanisms rather than democratic institutions (Observer Research Foundation, 2022).

CONCLUSION

The institutionalization of Panchayati Raj in Jammu and Kashmir before the abrogation of Article 370 remained incomplete and fragile. Structural weaknesses, bureaucratic dominance, lack of devolution, and prolonged political conflict prevented PRIs from functioning as genuine institutions of self-governance. Although the Panchayati Raj Act of 1989 introduced a three-tier structure, its implementation remained weak. Elections were irregular, financial powers were limited, and administrative control remained centralized. The conflict in Kashmir further undermined grassroots democracy by creating fear, distrust, and political instability. The constitutional changes of 2019 introduced significant reforms, including the implementation of a fully elected three-tier system. However, the persistence of centralized governance, financial dependency, and security concerns indicates that major challenges remain unresolved.

For PRIs to become effective democratic institutions in Jammu and Kashmir, several reforms are necessary. These include genuine financial devolution, reduction of bureaucratic interference, regular elections, protection for elected representatives, transparency in governance, and stronger public participation. Ultimately, grassroots democracy cannot succeed through administrative measures alone. It requires trust, accountability, political inclusion, and meaningful empowerment of local communities. Unless these conditions are fulfilled, PRIs in Jammu and Kashmir will continue to remain structurally present but democratically weak.

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Postgraduate Employability and Career Uncertainty: Risk-Minimizing Choices and the Role of Career-Information Marketing

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ABSTRACT

This review examines how postgraduate employability is shaped by volatile labor markets, institutional practices and individual career decision-making processes. It argues that postgraduate education alone does not ensure career clarity, as graduates frequently encounter structural mismatches between their qualifications and available opportunities, resulting in uncertainty, underemployment and nonlinear trajectories. Drawing on employability research and Social Cognitive Career Theory, employability is conceptualized as a developmental capacity integrating disciplinary knowledge, transferable skills, labor-market awareness and career self-management. The review highlights three themes: career switching toward teaching as a risk-minimizing but intentional strategy; the psychological impacts of anxiety, indecision and identity negotiation; and the role of career-information marketing systems such as counseling, alumni networks and digital platforms in enhancing career awareness and workforce readiness. It concludes that postgraduate career uncertainty must be addressed as a shared responsibility across graduates, institutions, employers and policy frameworks through integrated curricular, psychological and information-based interventions.

KEYWORDS

Self-Efficacy, Shared Responsibility, Social Cognitive Career Theory, Systemic Challenges, Teaching Career

INTRODUCTION

Postgraduate employability has become a focal issue as expanding participation in higher education intersects with increasingly volatile and competitive labor markets. The traditional assumption that advanced degrees naturally translate into secure and clearly defined career pathways has been destabilized by credential inflation, sectoral restructuring and shifting employer expectations. As a result, many postgraduates confront a disjuncture between their educational investment and the availability of stable, meaningful work, leading to heightened experiences of career uncertainty, underemployment and nonlinear trajectories. This situation has fuelled debate around how postgraduate programs can better support graduates to navigate complex transitions into work without reducing higher education to narrow job-training.

Within this context, employability is increasingly conceptualized as a multidimensional, developmental construct rather than a static attribute attained at the point of graduation. Harvey (2001, 2005) emphasizes that employability concerns the capacity to gain, sustain and, when necessary, regain employment in different settings, drawing on a combination of subject knowledge, transferable skills, personal attributes and informed career planning. Tomlinson and others argue that graduates must actively construct and signal their value in crowded labor markets, managing their identities and narratives in

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response to evolving employer norms and selection practices. From this perspective, postgraduate employability encompasses not only what students know and can do, but also how they understand labor-market dynamics, interpret risk and position themselves within uncertain opportunity structures over time.

This review situates postgraduate employability and career uncertainty at the intersection of structural, institutional and psychological factors and makes three linked contributions. First, it connects employability literature with the phenomenon of career switching toward teaching, interpreting teaching not as a mere fallback but as a risk-minimizing and meaning-oriented choice within constrained opportunity structures. Second, it integrates Social Cognitive Career Theory (SCCT) to illuminate the psychological mechanisms through which postgraduates experience anxiety, indecision and identity negotiation under uncertainty. Third, it introduces and elaborates a career-information marketing framework that conceptualizes structured communication systems as a strategic mediator between higher education and labor markets. Together, these strands provide a conceptual foundation for rethinking postgraduate employability as a shared responsibility across individuals, institutions, employers and policy environments.

Postgraduate Employability and Career Uncertainty

Postgraduate employability remains a critical theme in contemporary higher education discourse, particularly as global labor markets undergo rapid technological, economic and structural transformations. Employability is not solely determined by the possession of qualifications but by a synergy of intellectual capabilities, transferable skills, cognitive flexibility and informed career planning. From this perspective, employability extends beyond immediate job acquisition to encompass a lifelong capacity for adaptation and professional growth.

However, numerous systemic and individual challenges continue to undermine the employability outcomes of postgraduates. Limited exposure to industry practices and professional environments often prevents students from translating theoretical expertise into practical competence, and the absence of structured career counselling and inadequate institutional support mechanisms leaves many graduates ill-equipped to navigate complex career trajectories. A persistent mismatch between academic training and labor-market requirements further complicates transitions, particularly where research-focused pathways do not align with applied skill sets prioritized by employers.

The competitive saturation of academic job markets exacerbates career uncertainty, especially for those aspiring to research or faculty positions. Postgraduate researchers frequently experience prolonged transitions characterized by temporary contracts, project-based funding and unstable career prospects, which can generate chronic anxiety and a sense of professional liminality. Delayed or reactive career planning compounds these challenges, as many students consider non-academic options only after encountering repeated barriers within academia, restricting both mobility and confidence in exploring alternative sectors. Modern employment landscapes, shaped by globalization, digitalization and knowledge-based economies, require graduates to continuously reinterpret their professional identities, shifting from credential-based assurance to competency-based competition that demands self-regulation, networking and proactive engagement with interdisciplinary opportunities.

Career Switching Toward Teaching Profession as a Risk-Minimizing Strategy

Career switching toward teaching profession among postgraduates can be interpreted within a broader framework of risk management and career-choice behavior. Teaching, particularly in public and government-regulated systems, is frequently perceived as a stable and socially valued occupation that offers clearly defined roles and long-term security, making it attractive in contexts of uncertainty. Employment stability, government job opportunities,

predictable promotion systems and standardized pay scales provide clarity around progression and financial planning, often outweighing the uncertain prospects associated with research-intensive or project-based roles.

Social and familial expectations also play a critical role, especially in cultural contexts where teaching is seen as a respectable, morally valued profession that aligns with aspirations for secure and "decent" work. Limited availability of research positions in competitive academic and industrial sectors constrains alternatives, redirecting many highly qualified graduates toward teaching as a strategically selected route that balances professional identity, social recognition and long-term security, rather than as a residual option. In this sense, teaching careers should be understood as intentional, risk-minimizing choices within constrained opportunity structures, rather than purely fallback decisions.

Psychological Dimensions of Career Decision-Making

Career decision-making during the postgraduate phase is deeply intertwined with psychological processes, particularly under conditions of uncertainty. When future career paths appear ambiguous or unstable, individuals frequently experience anxiety, which can impair clear thinking and push them to delay decisions in order to avoid perceived risks. Over time, such hesitation can erode professional confidence and contribute to identity confusion, as individuals struggle to integrate their academic training, values and perceived opportunities into a coherent career narrative.

SCCT provides a useful framework for understanding these dynamics by emphasizing the role of self-efficacy beliefs, outcome expectations and perceived environmental supports and barriers in shaping career choices. When postgraduate students lack adequate career information, exposure or guidance, their self-efficacy may decline, outcome expectations become pessimistic or vague and perceived support from institutions or family may seem insufficient, weakening motivation to commit specific career goals. Under such circumstances, indecision is not merely a sign of individual weakness but a predictable response to constrained information, ambiguous opportunities and limited structural support. Strengthening career-information systems, mentoring and psychological support can therefore enhance self-efficacy, clarify outcome expectations and improve perceptions of environmental support, thereby reducing anxiety and supporting more timely decision-making.

Career-Information Marketing and Career Transparency

Career-information marketing refers to the deliberate, structured communication of career-related opportunities and pathways to students, with the aim of enabling informed and strategic decision-making. Positioned at the interface of education and employment, it functions as a systematic effort to translate complex labor-market realities into accessible, actionable guidance for postgraduates. In practice, this encompasses a range of initiatives, including formal career counselling programs, targeted internship promotion, alumni mentoring, job-market information sessions, employer talks and digital platforms that consolidate vacancies and resources. Drawing on Kotler and Fox (1995), conceptualization of educational marketing as communication that supports informed stakeholder decisions, career-information marketing can be understood as a student-centered framework rather than a passive or ad hoc service.

By improving transparency and permeability between education and employment systems, career-information marketing plays a crucial role in reducing career uncertainty among postgraduates. Clear, timely and credible information can mitigate anxiety, enhance self-efficacy and shorten periods of indecision by clarifying what pathways exist and how they can be accessed. In this sense, career-information marketing is not merely an ancillary service but a core component of institutional responsibility, aligning higher education provision with evolving labor-market expectations.

Conceptual Framework

The proposed conceptual framework shows how career-information marketing initiatives can systematically enhance postgraduate employability by connecting structured inputs to student development and subsequent career outcomes. Inputs such as counselling, industry exposure, mentorship, internships and alumni networks are expected to promote student development in the form of increased career awareness, better skill alignment, higher self-efficacy and stronger decision confidence. These developmental gains, in turn, are anticipated to lead to outcomes including improved employability, reduced unnecessary career switching, clearer career pathways and tighter alignment between education and employment.

This unidirectional progression is depicted in Figure 1 as three vertically connected boxes (Inputs → Student Development → Outcomes). The model can be empirically examined through longitudinal studies that relate the intensity and quality of exposure to specific inputs to changes in students' self-efficacy, decision-making and employment outcomes over time. In this way, the framework operates both as a strategic guide for institutional practice and as a scaffold for future empirical research on postgraduate employability interventions.

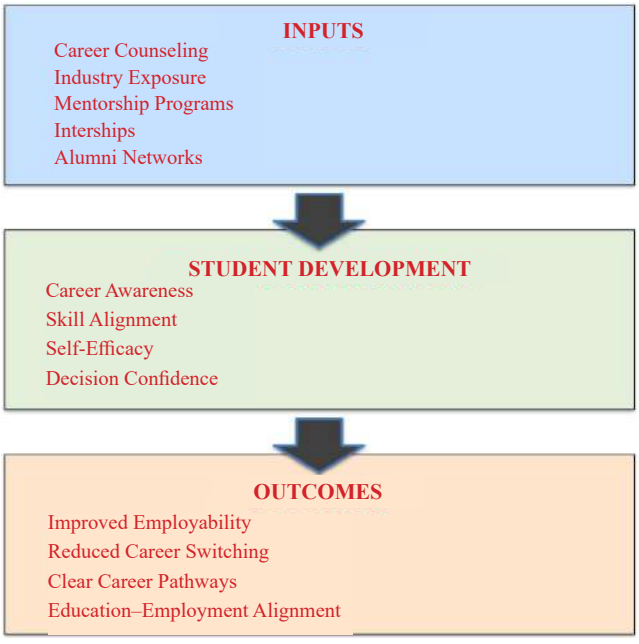

Figure 1. Career-Information Marketing Framework

DISCUSSION

The review highlights that postgraduate education alone does not ensure career clarity in volatile labor markets and underscores the need for integrated responses. Structurally, institutions must address gaps in industry engagement, experiential learning and labor-market intelligence; psychologically, they must support self-efficacy and adaptive decision-making; communicatively, they must design coherent career-information systems that enable students to navigate transitions with greater confidence.

Within this broader configuration, teaching careers appear as a revealing case: they embody how graduates weigh stability, social value and long-term sustainability against uncertainty and precariousness, and thus illustrate risk-minimizing choices within constrained opportunity structures. Applying SCCT shows that these choices are mediated by beliefs about capability, expectations about outcomes and perceptions of support and barriers, highlighting the interplay between structural and psychological influences. The career-information marketing framework proposed in this paper offers one way of conceptualizing how universities can act on this dual agenda by integrating communication, support and labor-market data into a coherent strategy for postgraduate employability.

CONCLUSION

Postgraduate employability in contemporary higher education cannot be reduced to the acquisition of advanced qualifications; it is a complex construct shaped by structural labor-market conditions, institutional practices and individual psychological processes. Many postgraduates experience persistent career uncertainty and underemployment because they confront competitive and volatile opportunity structures with limited industry exposure, fragmented career support and incomplete labor-market knowledge. In this context, career switching toward teaching should be understood as an intentional, risk-minimizing strategy rather than merely a fallback decision, particularly where teaching offers stability, structured progression and strong social legitimacy.

Psychological frameworks such as SCCT show that self-efficacy, outcome expectations and perceived environmental support mediate how postgraduates respond to uncertainty, shaping patterns of anxiety, indecision and identity negotiation. Strengthening these psychological resources requires institutional environments that provide transparent, credible and timely career information, as well as genuine opportunities for experiential learning and guided exploration. The concept of career-information marketing underscores that systematically designed communication systems can act as critical mediators between education and employment, reducing informational asymmetries and supporting more informed, proactive decision-making among postgraduates.

Overall, addressing postgraduate career uncertainty demands a shift from viewing employability as an individual deficit to recognizing it as a shared responsibility distributed across graduates, institutions, employers and policy frameworks. By embedding employability within curricula, investing in robust career-information infrastructures and acknowledging the legitimacy of risk-minimizing choices such as teaching, higher education systems can better align postgraduate education with the realities of contemporary labor markets while supporting diverse and meaningful career aspirations.

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Redesigning Learning Effectiveness through GAMES: A Learning Methodology for the New Age

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ABSTRACT

The rapidly evolving learner landscape - characterized by Gen Z, Gen Alpha, and emerging workforce cohorts - has exposed limitations in traditional linear instructional models. This practitioner-led paper presents the GAMES (Gamified Adaptive Micro-Engaging Self-Paced) Methodology as an integrated instructional framework designed to enhance engagement, personalization, and measurable learning outcomes across school education, higher education, and corporate training environments. Developed through field experience, the methodology combines structured gamification, performance-responsive adaptation, micro-learning architecture, behavioral engagement design, and learner-controlled pacing. The paper outlines the conceptual foundation of GAMES and demonstrates its application across digital and real-life learning contexts. The framework is positioned not as a replacement for existing pedagogical systems but as an augmentation layer that improves learning agility, motivation, and retention in contemporary learning ecosystems.

KEYWORDS

Adaptive Learning, Digital Learning, Gamified Motivation, Self-Paced, Unified Approach

THE EVOLUTION OF LEARNING METHODOLOGIES

Learning methodologies have evolved continuously in response to changes in society, technology, and our understanding of how people learn. Early learning systems were largely instructor-driven, emphasizing memorization, repetition, and standardized delivery. Knowledge was transferred in a linear manner, with learners expected to conform to fixed structures, pacing, and evaluation methods. As education systems matured, formal instructional models emerged to bring consistency and effectiveness to teaching and training. One of the most widely adopted models is the **ADDIE model,** which structures learning into five phases: Analysis, Design, Development, Implementation, and Evaluation (ADDIE). ADDIE introduced systematic planning and evaluation into learning design, ensuring alignment between objectives, content, and assessment. While highly effective for structured course development, ADDIE assumes relatively stable learner needs and does not inherently address real-time adaptivity or engagement fluctuations during instruction.

Another foundational framework, *Bloom's Taxonomy,* contributed significantly to learning theory by categorizing learning objectives into cognitive levels ranging from basic knowledge recall to higher-order thinking such as analysis, evaluation, and creation. Bloom's Taxonomy helped educators design outcome-oriented instruction and assessments, emphasizing cognitive progression. However, it primarily focuses on *what* learners should achieve, rather than *how* learning experiences should dynamically adapt to learner behavior, attention, or pace. As learning environments expanded beyond

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traditional classrooms, experiential learning, activity-based instruction, and learner-centered approaches gained prominence. These models recognized the importance of interaction, reflection, and application. Yet, they often lacked structured pacing, scalability, or consistent engagement mechanisms.

In recent years, concepts such as gamified learning, adaptive instruction, and micro-learning have emerged to address motivation, personalization, and cognitive load. However, these approaches are frequently applied in isolation, leading to fragmented learning experiences. The evolution of learning methodologies reveals a clear need for an integrated approach—one that retains the structural strengths of models like ADDIE and Bloom's Taxonomy while addressing their limitations. Effective learning today requires adaptability, engagement, manageable learning cycles, and learner autonomy working together. This realization forms the foundation for the GAMES learning methodology, which represents the next step in the evolution of how learning is designed and experienced.

THE CHANGING LEARNER LANDSCAPE

The profile of today's learner is fundamentally different from that of previous generations. Learners belonging to Gen Z, Gen Alpha, and the emerging Gen Beta have grown up in environments characterized by rapid information access, constant stimulation, and continuous interaction with technology and real-world experiences. As a result, their expectations from learning have shifted significantly. Modern learners seek relevance, engagement, and immediacy. They prefer learning experiences that are interactive, goal-oriented, and flexible rather than long, lecture-heavy sessions. Attention spans have become shorter not due to lack of capability, but due to increased exposure to multitasking environments and information overload. Traditional learning formats, which rely heavily on prolonged focus and passive listening, often fail to sustain interest or produce meaningful learning outcomes.

In addition to generational shifts, learner diversity has increased. Classrooms and training environments now include individuals with varying cognitive styles, learning speeds, motivation levels, and attention patterns. Some learners thrive in structured environments, while others perform better when given autonomy and flexibility. Learners with attention-related challenges, such as ADD or ADHD, often struggle in rigid systems that do not allow for movement, variation, or adaptive pacing. This changing landscape demands a learning methodology that is flexible yet structured, engaging yet purposeful, and adaptive yet consistent. Learning must move beyond content delivery and evolve into an experience that aligns with how modern learners think, engage, and grow.

THE NEED FOR A NEW LEARNING METHODOLOGY

The changing learner landscape has fundamentally altered how learning must be designed and delivered. As discussed in the previous chapter, learners today—particularly Gen Z, Gen Alpha, and emerging Gen Beta - exhibit different cognitive patterns, attention behaviours, and learning expectations. They seek relevance, interactivity, flexibility, and autonomy, and they respond poorly to long, passive, and rigid instructional formats. Despite this shift, many learning systems continue to rely on methodologies developed for earlier generations. Traditional classroom models emphasize linear delivery and uniform pacing. Corporate and professional training programs often compress content into intensive sessions with limited engagement. Even modern digital learning solutions frequently focus on efficiency rather than learner experience.

Over time, several approaches have emerged to address specific learning challenges. Gamified learning focuses on motivation and participation. Adaptive learning attempts to personalize instruction. Micro-learning addresses cognitive load and time constraints. Engagement-focused strategies aim to sustain attention. Self-paced learning promotes flexibility and autonomy. While each of these approaches offers value, they are typically implemented in isolation. The absence of a unified methodology that integrates all these dimensions

creates fragmented learning experiences. Learners may be motivated but not supported adaptively, engaged but cognitively overloaded, or given flexibility without sufficient structure. Educators and trainers are often forced to choose between engagement and discipline, personalization and scalability, or autonomy and accountability.

There is currently no widely established learning methodology that cohesively combines *gamified motivation, adaptive instruction, micro-learning structure, continuous engagement, and self-paced progression* into a single, practical framework applicable across physical, digital, and blended environments. This gap highlights the need for a new learning methodology - one that aligns with modern learner behaviour while retaining instructional structure and measurable outcomes. The GAMES learning methodology emerges from this need. It integrates these five essential elements into a unified approach, enabling learning experiences that are engaging, adaptive, manageable, and learner-centered. In doing so, GAMES responds directly to the demands of the contemporary learning landscape and offers a practical solution for today's evolving educational and training needs.

THE CONCEPTUAL PHILOSOPHY OF GAMES

At the core of any effective learning methodology lies a clear philosophy. The GAMES learning methodology is grounded in the belief that learning is most effective when it is active, adaptive, engaging, and respectful of individual pace. Rather than treating learners as passive recipients of information, GAMES positions them as active participants in their own learning journey. Traditional learning models often assume uniformity—same content, same pace, same structure for all learners. In reality, learners differ significantly in how they process information, sustain attention, and apply knowledge. The philosophy of GAMES recognizes this diversity and seeks to accommodate it through structured flexibility.

Another foundational principle of GAMES is that engagement is not incidental; it is essential. Engagement is not limited to entertainment or surface-level interaction. Instead, it refers to cognitive involvement, emotional connection, and purposeful participation. When learners are engaged, they are more likely to retain information, apply concepts, and persist through challenges. GAMES also embraces the idea that learning should occur in manageable cycles. Long sessions often lead to cognitive fatigue, reduced attention, and diminished outcomes. By breaking learning into shorter, focused segments, the methodology aligns with natural cognitive rhythms and allows time for reflection and reinforcement.

Finally, autonomy is a key philosophical pillar. GAMES supports self-paced progression while maintaining structure and accountability. Learners are given control over their pace, but not at the cost of direction or outcomes. This balance between freedom and responsibility is central to sustainable learning. Together, these principles form the conceptual foundation of GAMES - a methodology designed to be adaptable across contexts while remaining grounded in sound learning philosophy.

OVERVIEW OF THE GAMES FRAMEWORK

The GAMES framework is built around five interconnected components: Each component plays a distinct role, yet the true strength of the methodology lies in their integration.

- The **Gamified** component introduces elements such as challenges, goals, feedback, and rewards to create motivation and momentum. Gamification in GAMES is not limited to points or competition; it is about creating meaningful learning experiences that encourage participation and persistence.
- The **Adaptive** component ensures that learning responds to the needs of the learner. Adaptivity may involve adjusting the pace, complexity, or sequence of content based on performance, behaviour, or observed engagement. This allows learning to remain relevant and appropriately challenging.
- The **Micro** component structures learning into short, focused segments. Each segment

is designed with a clear objective and limited cognitive load. Micro-learning enables better retention, faster feedback, and more frequent opportunities for reinforcement.

- The **Engaging** component focuses on sustaining attention and involvement. This includes interactive activities, reflection prompts, discussion, and feedback loops that keep learners mentally and emotionally invested in the process.
- The **Self-Paced** component allows learners to progress according to their own rhythm while adhering to defined milestones and timelines. This balance supports autonomy without sacrificing accountability.

Rather than functioning independently, these components operate as a unified system. Gamification drives motivation, adaptivity ensures relevance, micro-learning manages cognitive load, engagement sustains attention, and self-paced progression respects individual differences. Together, they form a cohesive methodology that can be applied across classrooms, training environments, and real-life learning contexts, bridging the earlier gap identified in existing learning approaches.

THE GAMIFIED LEARNING COMPONENT

Gamification within the GAMES methodology is not about turning learning into entertainment. Instead, it is about applying game principles that naturally motivate human behaviour—goal orientation, challenge, feedback, and achievement—into learning experiences. When designed thoughtfully, gamification transforms learners from passive participants into active contributors. In traditional settings, motivation often depends on external pressure such as grades, deadlines, or authority. Gamified learning replaces this dependency with intrinsic motivation by making progress visible, achievable, and rewarding. Learners are encouraged to engage because the process itself feels purposeful and stimulating.

The GAMES methodology allows gamification to be implemented in both physical and digital environments. In classrooms, this may involve activity-based challenges, role-based tasks, group missions, or point-based participation systems. In professional training, it can include scenario-based challenges, performance levels, or achievement milestones. The emphasis is always on learning outcomes rather than competition alone. Gamification also supports collaboration. Team-based challenges and shared goals foster communication, peer learning, and collective problem-solving. This is particularly effective in mixed-ability groups, where learners support one another while progressing together.

Importantly, gamification in GAMES is adaptable. Rewards, challenges, and feedback can be adjusted based on learner response and context. This ensures that motivation remains sustained rather than short-lived. When learners see their effort translated into progress, recognition, or mastery, engagement increases naturally. Through gamification, learning becomes an experience rather than a task. It establishes momentum, encourages persistence, and creates a positive emotional connection with the learning process.

THE ADAPTIVE LEARNING COMPONENT

Adaptivity is a defining strength of the GAMES methodology. It recognizes that learners differ not only in ability, but also in pace, prior knowledge, motivation, and attention. A fixed learning path cannot effectively serve such diversity. Adaptive learning responds to this challenge by allowing instruction to evolve based on learner needs. Within GAMES, adaptivity operates at multiple levels. Content difficulty may be adjusted when learners demonstrate mastery or struggle. The pace of progression may slow down or accelerate based on performance. Activities may vary to re-engage attention or reinforce understanding. Adaptivity ensures that learning remains appropriately challenging without becoming overwhelming.

Adaptive learning does not require technology alone. In physical classrooms or training environments, instructors can observe learner behavior, participation levels, and responses to adjust instruction in real time.

In digital or blended settings, adaptive mechanisms may be supported through analytics and automated feedback. One of the key advantages of adaptivity is inclusivity. Learners with attention variability or learning differences benefit from a system that adjusts rather than penalizes. Instead of forcing all learners to conform to a single pace, GAMES allows learning to meet learners where they are.

Adaptivity also enhances confidence. When learners experience success at an appropriate level of challenge, they are more likely to remain engaged and motivated. Failure becomes part of the learning process rather than a barrier. By embedding adaptivity into the methodology, GAMES creates a responsive learning environment that evolves alongside the learner, ensuring relevance, fairness, and sustained progress.

THE MICRO-LEARNING COMPONENT

The micro-learning component of the GAMES methodology is grounded in the understanding that learning is most effective when delivered in focused, manageable segments. Long instructional sessions often lead to cognitive fatigue, reduced attention, and lower retention. Micro-learning addresses this challenge by structuring learning into short, purpose-driven cycles. In the GAMES framework, micro-learning does not mean fragmented or superficial learning. Each micro-learning segment is designed with a clear objective, specific outcome, and immediate opportunity for application or reflection. These segments typically last only a few minutes, allowing learners to engage fully without feeling overwhelmed.

Micro-learning also supports natural cognitive rhythms. Learners benefit from short-learning bursts followed by brief pauses, which allow the brain to process and consolidate information. These intentional breaks play a critical role in sustaining attention and preventing mental overload, especially in high-intensity learning environments. Another advantage of micro-learning is flexibility. Micro-units can be rearranged, repeated, or adapted based on learner needs. This makes the methodology highly responsive and scalable across different contexts, including classrooms, training programs, and skill-based workshops.

For learners with attention variability, micro-learning offers a significant advantage. Short sessions reduce pressure, lower entry barriers, and make re-engagement easier after moments of distraction. Progress feels achievable, which enhances confidence and motivation. Within GAMES, micro-learning serves as the structural backbone that supports engagement, adaptivity, and self-paced progression. It ensures that learning remains focused, efficient, and aligned with how learners naturally absorb information.

THE ENGAGING LEARNING COMPONENT

Engagement is the connective force that sustains learning over time. Without engagement, even well-designed content fails to produce meaningful outcomes. The engaging component of the GAMES methodology focuses on maintaining cognitive, emotional, and behavioral involvement throughout the learning process. Engagement in GAMES goes beyond surface-level interaction. It emphasizes active participation, problem-solving, reflection, and feedback. Learners are encouraged to think, respond, discuss, and apply concepts rather than passively consume information. The methodology incorporates a variety of engagement techniques that can be applied in both physical and digital settings. These include interactive activities, real-life scenarios, simulations, peer discussions, quick challenges, and reflection prompts. Such techniques help sustain attention and deepen understanding.

A key strength of the engaging component is its role in attention recovery. Learners naturally experience fluctuations in focus. Instead of penalizing distraction, GAMES uses engagement triggers to re-capture attention. Short activities, movement-based tasks, or interactive questions help bring learners back into the learning flow. Engagement also supports emotional connection. When learners feel involved and valued, they develop a positive relationship with the learning

process. This increases persistence, reduces dropout, and improves overall outcomes. By intentionally designing for engagement, the GAMES methodology ensures that learning remains dynamic, responsive, and meaningful. Engagement is treated not as an optional enhancement, but as an essential element of effective learning.

THE SELF-PACED LEARNING COMPONENT

Self-paced learning is a central pillar of the GAMES methodology. It recognizes that learners progress at different speeds and that meaningful learning cannot be forced into a uniform timeline. At the same time, unstructured flexibility often leads to procrastination or incomplete outcomes. GAMES resolves this tension by combining learner autonomy with clear structure and accountability. In the GAMES framework, self-paced learning allows individuals to move forward based on readiness rather than comparison with others. Learners can spend more time on challenging concepts and progress quickly through familiar material. This flexibility supports deeper understanding and reduces frustration.

Importantly, self-paced learning in GAMES is not open-ended. Progress is guided by defined milestones, checkpoints, and timelines. These structures ensure that learners remain oriented toward outcomes while maintaining control over how they reach them. In classroom and training environments, this may involve flexible session pacing within a defined schedule. In blended or digital contexts, it may include progress tracking and completion windows. Self-paced learning also fosters responsibility. When learners are trusted to manage their own progress, they develop ownership and intrinsic motivation. This is particularly valuable for adult learners and professionals who balance learning with other commitments. By balancing autonomy with structure, the self-paced component of GAMES creates a learning environment that is flexible, respectful, and outcome-driven. It enables sustained engagement without sacrificing discipline or clarity.

SUPPORTING DIVERSE AND NEURODIVERSE LEARNERS

Modern learning environments are increasingly diverse, encompassing a wide range of cognitive styles, learning preferences, and attention patterns. The GAMES methodology is intentionally designed to support this diversity by offering flexibility, adaptivity, and engagement within a structured framework. Learners with attention variability, including those with ADD or ADHD, often struggle in traditional learning systems that rely on prolonged focus, passive instruction, and rigid pacing. GAMES addresses these challenges through short learning cycles, frequent engagement triggers, and adaptive pacing. Micro-learning segments reduce cognitive fatigue, while interactive activities help re-engage attention when it fluctuates.

Adaptivity plays a critical role in inclusivity. When learning adjusts to learner response rather than enforcing uniform progression, individuals are less likely to feel left behind or overwhelmed. Gamified elements further support motivation by providing immediate feedback and visible progress. The self-paced component also contributes to inclusivity by allowing learners to move forward at a rhythm that suits their cognitive and emotional needs. This reduces anxiety, builds confidence, and encourages persistence. Beyond attention-related differences, GAMES supports diversity in learning goals, backgrounds, and experience levels. Whether learners are beginners, advanced practitioners, or returning after a gap, the methodology accommodates varied starting points. By design, GAMES promotes equity in learning. It shifts the focus from conformity to capability, ensuring that diverse and neurodiverse learners are not merely accommodated, but actively supported in achieving meaningful outcomes.

IMPLEMENTATION ACROSS LEARNING CONTEXTS

The operational strength of the GAMES methodology lies in its adaptability across diverse learning ecosystems. Rather than prescribing a single delivery model, the framework functions as a modular

enhancement layer that can be calibrated to the maturity, scale, and objectives of different learning environments. From a practitioner perspective, successful implementation depends on contextual alignment, facilitator readiness, and the disciplined use of feedback loops. For effective deployment, institutions are advised to begin with pilot cohorts, establish baseline engagement indicators, and progressively layer gamified, adaptive, and micro-learning elements. The following subsections outline structured implementation pathways across key learning contexts.

Digital Learning Implementation: In technology-enabled environments, the GAMES methodology can be fully operationalized through Learning Management Systems (LMS), adaptive learning platforms, and AI-supported analytics engines. The digital ecosystem allows the five pillars of GAMES to function in a tightly integrated manner. A typical digital implementation begins with modular course design aligned to micro-learning principles. Each learning unit is followed by a rapid formative assessment that feeds performance data into the adaptive engine. Based on learner accuracy, response time, retry behavior, and engagement frequency, the system dynamically adjusts content sequencing and difficulty levels.

Gamified dashboards provide continuous progress visibility through points, milestone badges, and level advancement indicators. Automated nudges and reminders further sustain learner momentum in self-paced environments. Organizations adopting this model frequently report improved course completion rates, higher voluntary re-engagement, and richer learner analytics for instructional decision-making.

Real-Life/Physical Learning Implementation: In face-to-face environments, the GAMES framework is implemented through structured session design rather than heavy technology dependence. Trainers and educators can operationalize the model using micro teaching bursts, rapid knowledge checks, visible progress trackers, and structured peer interaction. A recommended classroom flow includes short instructional segments (10–15 minutes), followed by quick gamified reinforcement activities such as challenge cards, rapid quizzes, or peer problem-solving tasks. Performance data collected across sessions informs adaptive regrouping decisions. Physical environments particularly benefit from the engaging and micro-components, which help sustain classroom energy and reduce passive listening fatigue. Low-tech visual scoreboards, participation meters, and milestone charts can effectively replicate digital gamification effects when implemented consistently.

School-Level Application: At the school level, the GAMES methodology supports differentiated instruction while remaining compatible with prescribed curricula and timetable structures. Implementation typically begins with micro-segmented lesson planning supported by frequent formative checks. Students are periodically regrouped into developmental bands (A, B, and C) based on cumulative performance indicators. Importantly, these groupings remain fluid and developmental rather than fixed. Learners requiring additional support receive guided reinforcement sessions, while advanced learners engage in enrichment challenges and peer mentoring roles. Practitioner observations indicate improved classroom participation, stronger homework completion rates, and increased willingness among students to attempt higher-difficulty tasks. The structured yet dynamic nature of GAMES is particularly supportive for learners demonstrating attention variability, including those with ADD or ADHD, as the model reduces cognitive overload and increases feedback frequency.

College and University Application: In higher education settings, the GAMES methodology aligns strongly with outcome-based education and blended learning models. Faculty members can redesign conventional lecture blocks into modular learning sprints supported by rapid case-based challenges and adaptive content release. Within university LMS environments, student performance data can trigger automated academic support pathways.

For example, learners demonstrating concept gaps may receive targeted refresher modules, while high performers unlock advanced case analyses or applied projects. This approach preserves academic rigor while enabling differentiated progression. Blended implementations—combining classroom discussion with digital reinforcement—have shown particular promise. Early practitioner feedback suggests improved engagement during extended academic sessions, reduced last-minute examination stress, and more consistent learner preparation patterns.

Corporate Training Application: Corporate learning ecosystems often face persistent challenges related to attention fatigue, low post-training retention, and uneven skill transfer to the workplace. The GAMES methodology addresses these issues by converting traditional workshops into performance-driven learning journeys. In a typical corporate deployment, training content is delivered through micro learning bursts interspersed with scenario-based simulations and real-time progress indicators. Participants are dynamically grouped into proficiency bands based on simulation scores and formative assessments.

Employees in development bands receive targeted coaching interventions and guided practice labs, while advanced performers are assigned stretch simulations or peer mentoring responsibilities. Post-program reinforcement is sustained through short digital nudges and micro refreshers delivered over time. Organizations applying this structured approach commonly report higher training satisfaction scores, improved participation in voluntary learning modules, and stronger evidence of on-the-job application. The methodology is particularly effective in capability-building programs where continuous practice and feedback are critical to skill mastery.

Ensuring Motivation without Demotivation: A critical design principle of GAMES is psychological safety. Adaptive grouping is positioned as developmental support rather than ranking. Practitioners emphasize progress journeys, celebrate improvement milestones, and maintain private performance feedback where appropriate. When implemented sensitively, the model strengthens learner confidence rather than creating anxiety.

COMPARISON WITH EXISTING LEARNING MODELS

To understand the value of the GAMES methodology, it is important to compare it with existing learning models and frameworks. Traditional instructional models emphasize linear progression, standardized pacing, and content-centric delivery. While these models provide structure, they often lack flexibility and engagement. Instructional design frameworks focus on planning and evaluation but do not prescribe how learning should adapt in real time. Experiential learning models emphasize activity and reflection but may lack scalability, consistency, and measurable progression. Gamified approaches often focus on motivation but operate as surface-level enhancements rather than integrated systems.

Digital learning platforms frequently incorporate micro-learning or adaptivity, but these elements are typically implemented in isolation. As a result, learning experiences become fragmented, with engagement, personalization, and pacing treated as separate concerns. GAMES methodology differs fundamentally in its integrated design. It combines gamification, adaptivity, micro-learning, engagement strategies, and self-paced progression into a single cohesive methodology. Each component reinforces the others, creating a balanced learning system that is both flexible and structured. Rather than replacing existing models, GAMES builds upon their strengths while addressing their limitations. This integration allows the methodology to function across physical, digital, and blended environments, making it more versatile and sustainable than isolated approaches.

OUTCOMES AND BENEFITS OF THE GAMES METHODOLOGY

The effectiveness of any learning methodology is measured by its outcomes. The GAMES methodology delivers tangible benefits by addressing engagement, retention, adaptability, and learner autonomy within

a single integrated framework. One of the most significant outcomes of GAMES is improved learner engagement. By combining gamified motivation, interactive activities, and adaptive pacing, learners remain actively involved throughout the learning process. Engagement is sustained not through external pressure, but through meaningful participation and visible progress. GAMES also enhances knowledge retention. Micro-learning segments reduce cognitive overload and allow learners to focus on specific objectives. Frequent reinforcement and application opportunities strengthen understanding and long-term recall. Learners are more likely to apply what they learn because content is delivered in manageable, relevant units.

Another key benefit is inclusivity. GAMES accommodates diverse learning styles, experience levels, and attention patterns. Learners who may struggle in rigid systems benefit from flexibility, adaptivity, and self-paced progression. This creates a more equitable learning environment where individuals can succeed based on capability rather than conformity. From an institutional and organizational perspective, GAMES offers scalability and consistency. The methodology can be applied across different contexts while maintaining core principles. Educators and trainers gain a repeatable framework that delivers reliable outcomes without sacrificing flexibility. Ultimately, GAMES improves learning efficiency, satisfaction, and measurable performance, making it a valuable methodology for modern education and training.

FUTURE SCOPE AND EVOLUTION OF THE METHODOLOGY

The GAMES methodology is designed not as a static model, but as a framework capable of evolving alongside changing learning needs. As learner expectations, workplace demands, and educational environments continue to shift, the adaptability of GAMES ensures its long-term relevance. Future applications of the methodology may include deeper integration with technology-supported learning environments. While GAMES is not dependent on digital tools, data-driven insights can enhance adaptivity, personalization, and progress tracking in blended and digital contexts.

The methodology also holds potential for expansion across diverse domains. Beyond formal education and corporate training, GAMES can be applied in community learning, leadership development, creative disciplines, and lifelong learning initiatives. Its flexible structure allows customization without compromising core principles. As research in learning science and behavioural psychology advances, GAMES can incorporate new insights while maintaining its foundational philosophy. Continuous refinement and contextual adaptation will allow the methodology to remain effective and inclusive. The future of learning requires approaches that balance structure with flexibility, engagement with discipline, and autonomy with accountability. GAMES is positioned to meet these requirements, offering a sustainable and forward-looking solution for evolving learning ecosystems.

CONCLUSION

Learning in the modern world requires more than content delivery. It demands engagement, adaptability, inclusivity, and respect for individual pace. Traditional methodologies, while foundational, often struggle to address the realities of contemporary learners and learning environments. The GAMES learning methodology emerges as a response to these challenges. By integrating gamification, adaptive instruction, micro-learning structure, engagement strategies, and self-paced progression into a single cohesive framework, GAMES offers a balanced and practical approach to learning. It recognizes that learners differ in attention, motivation, experience, and readiness, and it accommodates these differences without compromising structure or outcomes.

GAMES methodology is not limited to a specific platform, technology, or environment. It can be applied in classrooms, training programs, real-life

activities, corporate settings, and blended learning ecosystems. Its flexibility makes it relevant across age groups, industries, and learning objectives. Most importantly, the methodology shifts the focus of learning from compliance to participation, from uniformity to personalization, and from instruction to experience. It empowers learners to take ownership of their progress while providing educators and trainers with a reliable, scalable framework. As learning continues to evolve, methodologies that balance human behavior, cognitive science, and practical implementation will define the future. GAMES represents such a methodology—designed not just for today's learners, but for the learning challenges of tomorrow.

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The concepts and principles discussed in this article are informed by established ideas in learning science, pedagogy, instructional design, behavioral psychology, and experiential learning. This work represents an original integration and interpretation of these foundational concepts, developed through independent research and professional practice.

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Road Transport Infrastructure Management and Toll Collection System: Strategic Issues

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ABSTRACT

India has developed one of the largest Public Private Partnership (PPP) programs in the world is ranked fourth in Asia with first rank having 358 projects with a total cost of Rs. 676,637 Crore. Toll collection methods adopted are being upgraded with the upcoming technology; FASTag and Electronic Toll Collection systems are being put to use. NHAI, a statutory body is in-charge of administering, financing and management of road network. The exiting system of FASTag is replaced with satellite based Global Navigation Satellite System (GNSS) with effect from May 1, 2025, to charge for the distance covered and to be hassle free, transparent and low operating cost. Electronic Road Pricing, traffic pricing to cover congestion and air pollution are being planned, however there are challenges of road network development, and road maintenance and toll collection facility to commuters needs to be looked into.

KEYWORDS

Commercialization, National Highways, Public Private Partnership, Toll Collection Methods, Traffic Pricing

INTRODUCTION

Road transport system in India is an important mode of transport, both in terms of passenger traffic and freight trade, it accounts for 85% of passenger traffic and about 65% of freight. It is reliable, flexible and easily accessible transport mode, and promotes equitable socioeconomic regional development across regions. India has the second largest road network of about 66.17 lakh km after the United States; road density of 1.94 km per square meter of land in India is equal to that of Hong Kong as against that of United States (0.71 km), China (0.54 km), Brazil (0.23 km), and Russia (0.090 km) - Transport in India (Wikipedia); Ministry of Road Transport & Highways (2023-24). Further, in terms of population density per 1,000 people, India has approximately 5.13 km of roads as against 20.5 km in the United States, but higher that of China (3.6 km). There has been an increase in national highway (NH) network from 91,287 km in 2014 to 146,145 km in 2023, i.e., approximately by 60% and its break-up, for the year 2023 is as under (Fig. 1):

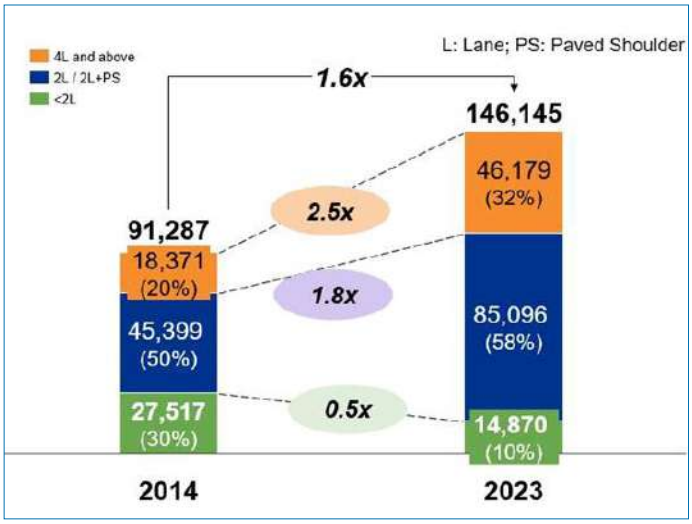

Figure 1: National Highway (NH) Network

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- Four lane and above: 32%
- Two lanes and above: 58%; and
- Less than 2 lanes 10%

The road network development had been financed by cess of Rs. 1 per liter levied on petrol/diesel, the cess was later raised to Rs. 8 per liter[1]. The road cess was first introduced in 1998-99 and the motor vehicle users were required to pay the cess at the time of purchase of fuel. The funds collected through this cess, popularly known as "*road cess*" was used by the government to take up road projects all over the country and it was replaced in the 2016 budget as "*road and infrastructure cess*". The infrastructure cess was imposed on the mass production of vehicles and the motor vehicle manufacturers were required to pay the tax depending on the capacity and type of vehicle produced, the tax rate ranged from 1 to 4%. The infrastructure cess so collected by the government is used for the development and maintenance of national highways, rural and state roads, railway projects, and other infrastructure projects in sectors like, energy, communication, water and sanitation, and transport.

The paper has the objective to discuss road transport infrastructure, and road toll system developments over the years. The paper is spread over five parts. The current part presents road network details, road transport importance and significance. The second part discusses finances of road infrastructure, mechanism of involvement of private sector and PPP approach in road and infrastructure development. Road toll charges and road toll methods are the subject matter of part three; FASTag, Electronic Toll Collection system with technological developments say, Global Navigation Satellite System (GNSS) based tolling system with effect from May 1, 2025 is also discussed in this part. An overview of recent developments like, traffic prices and proposed alternative transport methods is presented in part four. The last section presents challenges for the road transport and toll collection system and way-out for the same.

[1]*Notification No. 10/2022-Central Excise, Dated: 30.06.2022*

Ministry of Road Transport and Highways (MoRTH) is responsible for formulating and administration of roads transport and national highways policies in India. Four agencies, i.e., NHAI, NHDCL, CPWD and PWD contributing to development of infrastructure and road network are as under:

1. ***The National Highway Authority*** (NHAI) oversees 151,000 km of national highways and expressways and it accounts for approximately 2.19% of the total road network; The National Highways Authority of India (NHAI), a statutory body constituted by an Act of Parliament in 1988, is responsible for development, maintenance and management of National Highways, by entering into Concession Agreements with private agencies to design, construct, operation and maintenance of highways.
2. ***National Highways and Infrastructure Development Corporation Limited (NHIDCL):*** specializes in challenging terrains, border areas, and regions with limited connectivity; it contributes to the overall national highway network, and several strategic projects near India's borders; some of the notable projects include:
    - Trans-Arunachal Highway to connect various regions within Arunachal Pradesh and to promote economic growth of the state;
    - ***Hayuliang-Hawai Road:*** Connecting regions in Arunachal Pradesh;
    - ***Joram-Koloriang Road:*** Enhancing connectivity in challenging terrains;
    - ***Hunli-Anini Road:*** Improving access to remote areas;
    - ***Imphal-Moreh Road Project:*** to construct 65-km-long road in Manipur.
3. ***Central Public Works Department (CPWD):*** The CPWD, under the (Ministry of Housing and Urban Affairs (MoHUA), is responsible for buildings, roads, bridges, flyovers and other complicated structures including stadiums, auditoriums, laboratories, bunkers, border fencing and border roads (hill roads);

4. ***Public Works Departments*** (PWDs) of State/ Union territories handle different categories of roads as:
   - ***State Highways:*** Handle approximately 186,528 km; it accounts for 3.00% of the total road network;
   - ***District Roads:*** Around 632,154 km; it accounts for 10.17% of the total road network;
   - ***Rural Roads:*** managed by Panchayats and the Pradhan Mantri Gram Sadak Yojana (PMGSY), covers 4535,511 km; it accounts 72.97% of the total road network;
   - ***Urban Roads:*** Administered by municipal corporations and municipalities, totalling 544,683 km, account for 8.76% of the total road network.

VARIOUS MODES USED FOR FINANCING OF INFRASTRUCTURE AND ROADS NETWORK

1. ***Tolling and User Charges*** are common among various countries to raise funds for road infrastructure. Advancements in technology have led to innovations like "free-flow" tolling, user-charging models based on road use, "value capture", and "traffic pricing". This aspect is detailed latter.
2. ***Public Private Partnership (PPP) approaches for infrastructure projects including road transports:*** PPP is a long-term arrangement between government and private entity wherein the private agency contributes in the form of its expertise, finances, performs various activitys and delivers service to the consumer. In the twelfth Five Year Plan about 50% of the total outlay was estimated to be contributed by the private sector. As such, PPP differs from privatisation, under privatization ownership is passed on to the private agency and the government ceases to be the owner; while under PPP approach, the government continues to be the owner and the private agency contributes its expertize or finances or takes up the management of the enterprise for the agreed period; PPP can be at initiative of private agency or the government.

Thus, uunder PPP approach, the private agency assumes three roles as:

- Designer or constructure
- Financer and
- Operator.

As such, PPP approach takes diverse forms including[2]

a. Build-Operate-Transfer (BOT)

b. Build-Operate-Own-Transfer (BOOT)

c. Annuity Method

d. Hybrid Annuity Method (HAM)

e. Lump Sum Fixed Price[3]. as negotiated price, or guaranteed price, or progressive price

f. Cost plus Fee.

As regards construction of roads under PPP approach, Maharashtra was one of the first state to privatize construction of roads, and most of the 137 odd road works cleared since 1989 had been on BOT basis. Private entities were involved to construct and maintain roads by collecting toll for the predetermined period and handing over the project to the state government on completion of the agreed period. Approximately 4,685 km of roads at a total cost of Rs. 15,220 crore involved accounted for about 2% of Maharashtra's total road length; this yielded annual road revenue of Rs. 750 crore for the state government.[4],[5]

[2]Forms "a to d" above have been normally followed for road highways while forms "e & f" above were considered for airport privatization.

[3]Dhameja, Nand & Gupta, Rakesh (2012, April-June). Infrastructure Development Through PPP: A Case Study of IGI Delhi Airport Agreement Process, Monitoring, Project Cost Estimation and Finances - Problem Areas and Lessons. *Indian Journal of Public Administration, LVIII(2)*, 23–37.

[4]Dhameja, Nand; Dhameja, Sarika (2016). Infrastructure Development and Financing, including Social Infrastructure Issues and Challenges, Viva Publishing, 179-80.

[5]Garole, Amol P., More, A. B., Jarad, Ganesh P. Jarad (August 2016). Overrun in Build Operate Transfer Infrastructure Projects: A Case Study on BOT Road Project in Maharashtra. *International Research Journal of Engineering and Technology, 3*(8).

Further, it is reported that more than 250 national highway projects have been tendered on HAM basis under the PPP approach between 2016 and 2021 and HAM has been widely accepted by the private sector, allowing new players to enter infrastructure project delivery. It promotes competition and efficiency in delivering public services. Specific HAM contracts include projects like the Somnath-Jetpur, Saharanpur-Yamunanagar, and Delhi-Meerut Expressway.

It may be reported that six airports, namely, Delhi, Mumbai, Bengaluru, Hyderabad, Chennai and Kolkata, have been monetised by long-term lease of 50 years on PPP approach, the private party having a guaranteed 16% return on equity. In addition, 25 other airports are planned to be monetized for operation and management[6]. Highways and other infrastructure projects have also been developed by adopting various PPP approaches like, BOOT, BOT, Annuity system.

Let us discuss the **mechanism of private entities** involvementin infrastructure development, it is as under:

- ***Conceptualization:*** Preparation of project technical specification laying down the broad outline of the project;
- ***Commercialization:*** Ascertain operating cost and service cost price per unit for determining the charges which users will have to pay;
- ***Involvement of private agency in development of the project:*** private party which satisfies the required criteria and experience is selected; timeframe for completion and other conditions relating to project development and its operation are laid down;
- ***Negotiation of tariff rates/ revenues on the principle*** that the private agency will be able to recover operating costs and investment costs during the period of the operation of the project, say 30- 50 years;
- ***Financing:*** Arrangement of finances for the project which may be on non-recourse, or recourse basis;
- Transfer of project to government after the stipulated period, say, 30-50 years With the growing urbanization, governments are constrained because of limited budgetary resource, PPP approach is becoming common and private entities are being associated in delivery of infrastructure and public services[7]

PPP PROGRAMS AND PROJECTS RECOMMENDED BY PPP APPRAISAL COMMITTEE

India has developed large number PPP Programs and is one of the leading countries in terms of readiness for PPPs with ~2000 PPP projects in various stages of implementation. As per the 2018 Introscope Report of the Economist Intelligence Unit, India ranked fourth in Asia with first rank in investment and business climate and second rank in finance parameters.[8] Projects Recommended by Public Private Partnership Appraisal Committee (PPPAC): Sector-wise are presented in Table 1.

Table 1: PPP Projects Recommended: Sector-wise

S. No.	Sector	Number of Projects	Total Project Cost (Rs. Crore)
1	Affordable Housing	9	7,633
2	Airports	10	9,017
3	Oil/ Gas/ Liquified Natural Gas/ Storage Capacity/	2	21,977
4	Ports	41	66,115
5	Post-harvest and Storage of inputs for agriculture for Agriculture Produce including Cold Storage	3	2,100
6	Power	1	0
7	Railway Track including Electric & Signaling system, tunnel, Viaducts, bridges	13	123,057
8	Roads	264	340,199
9	Sports Infrastructure	4	0
10	Telecommunication & and Telecom Services	4	94,872
11	Tourism	6	1913
12	Transportation & Logistics	1	9751
	TOTAL	**358**	**676,637**

Source: pppin.india.gov.in (Department of Economic Affairs, GOI)

[6]Dhameja, Nand L., Bobek, Samo; Dhameja, Manish, Dhaliwai, Amandeep & Khatter, Ridhi (2022, December). Asset Monetization: A Step Toward Liberalization and Privatization - Strategic Issues. *Indian Journal of Public Administration, 68*(4), 632-34.

[7]Dhameja, Nand; Dhameja, Sarika (2016), Chapters 2 &3, ibid

[8]*pppin.india.gov.in (Department of Economic Affairs, GOI*

As such India has emerged as the largest PPP market in the world with over 356 infrastructure projects having a total cost of Rs. 676,637 crore detailed in Table 1.

To illustrate let us take the example of Adani Infrastructure

Adani Road Transport Ltd (ARTL), a wholly owned subsidiary of Adani Enterprises Ltd (AEL), acquired Gujarat Road and Infrastructure Company Ltd (GRICL) and Swarna Toll Way Private Ltd (STPL). ARTL planned to acquire 56.8% in GRICL and 100% stake in STPL as per regulations, the transaction was expected to close in September 2022.

Two stretches of toll roads owned by ATPL in Andhra Pradesh were:

a. Tada to Nellore on NH-16, it connected important ports spanning 110 km such as Chennai, and Krishnappa in Andhra Pradesh; and

b. Nandigram to Brahmana to Vijayawada on NH-65 spanning 48 km; connecting key southern metro cities, and providing feeder traffic to NH-16.

As such, STPL portfolio has a strong revenue growth[9].

INNOVATIVE FINANCING INSTRUMENTS

Financing Instruments for infrastructure and roads include,

- Investment funds, development banks, and state infrastructure banks that provide risk capital for projects;
- Debt instruments examples include credit assistance, corporate bonds, and guarantees[10];
- ***Value Capture:*** this method captures value from land development, increased property values, or economic activities near roads.

[9]Business Standard (August 5, 2023). Adani Road Transport - Adani unit to buy some of Macquarie Asia's India toll roads for Rs. 3,110 cr.

[10]Dhameja, Nand L., Panjwani, Ashok, Aggarwal (2017). Financing and Managing Projects: A guide for Executives and Professionals. Business Express, Vol. I & II.

ROAD USAGE CHARGES AND TOLL COLLECTION METHODS

For a public road, a fee (normally termed as *toll*) is assessed, and is called toll road or **turnpike** or **tollway.** This system of road pricing is to recover the cost of road construction and its maintenance; or to regulate traffic on heavily congested and busy roads. Toll roads have existed in some form since antiquity, tolls were levied on travelers on foot, or wagons, or horseback, or on automobiles - the toll varied for different types of automobiles.

Toll roads existed even before 2,700 years, and tolls were paid by travelers using the Susa–Babylon highway under Ashurbanipal regime 7th century BC. In India, before fourth century BC, tolls were paid. Maharashtra state had developed a large number of roads on toll basis; and the toll revenue had been an important source of revenue for the government, despite a number of resistances by residents.

London instituted the London congestion charge in 2003 to reduce traffic in the city by levying toll on the city roads tolled. Similarly, in the United States, toll was levied to raise revenue for road construction, maintenance and to control traffic; and the new toll road construction saw significant increase during the first two decades of the 21st century[11].

Tolls are collected at toll plazas, toll booths, toll houses, toll stations, toll bars, toll barriers, or toll gates. With the increase in business activities and advancement in technology, toll collection has increased from Rs. 6.5 billion in 2016-17 to Rs. 54 billion in 2022-23. Toll collections over the years is presented in Figure II[12]

Toll collection methods: Before we discuss the recent technology advances in toll collection, let us discuss the different toll collections methods prevalent; these are as under;

- ***Manual Manned Toll:*** Under this system, toll is collected from the drivers by the toll road operator in a booth, the toll price usually varies

[11]Wikipedia Toll road, ibid

[12]NPCI.

at different timings of the day, and also the types of the automobiles.

- ***Unmanned automated toll-booth:*** Toll is collected as the vehicle passes through the toll booth, the toll booth opens and the toll is paid by cash or through credit card.
- The manual toll collection systems discussed above have limitations in terms of limited size and its inelasticity to match the increasing transport and growing urbanisation; FASTag an electronic toll collection system was first introduced as a pilot project on the Delhi - Mumbai stretch of the Golden Quadrilateral in 2014; the NHAI implemented it across the nation in December 2019. FASTag employed Identification (RFID) technology for making toll payments directly from the prepaid or savings account linked to it or directly toll owner. The tag was affixed on the windscreen of the vehicle to enable the driver to drive through toll plaza without stopping for transaction. The tag could be purchased from the official tag issuers or participating banks, the tag was linked to the prepaid account and could be recharged. As per NHAI, FASTag had unlimited validity. 7.5% cashback offers were also provided to promote the use of FASTag; dedicated lanes were also built at some toll plazas for FASTag.

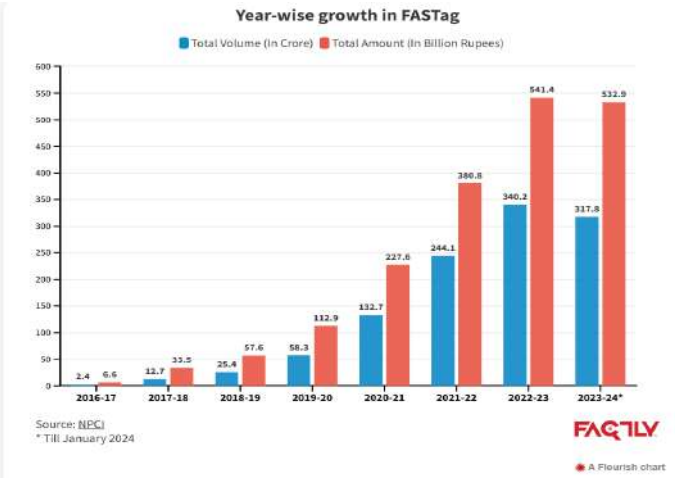

Figure 2

In fact, prior to FASTag, commuters had to stop at physical booths, pay cash, and endure long queues, resulting in significant delays and inefficiency. The challenges with manual tolling necessitated the introduction of Radio Frequency Identification (RFID)-based FASTag, automating toll collection through cashless payments.

FASTag's implementation had been a success in India, were issued by the National Electronic Toll Collection (NETC); and this led to a significant boost in the toll collection efficiency. The daily toll collection through FASTag system achieved a historic milestone on April 29, 2025 by reaching an all-time high of Rs. 193.15 crore, with 1.16 crore transactions in a single day, corresponding average of single day collections in December 2022 and December 2024 were Rs. 134.44 crore, and Rs. 144.19 crore, respectively.

However, the need for more advanced and efficient system had become evident as India's road network, the second largest in the world, continued to expand and handled 85% of passenger traffic and 65% of freight. The government decided to replace the existing FASTag system with more advanced Global Navigation Satellite System (GNSS), a barrier-less toll collection system based on advanced technologies. The GNSS toll charge is a revolutionised toll charge system with the objective to reduce the current average waiting period from 714 seconds to a mere 47 seconds for each user. It is expected to minimise traffic congestion and ensure a smoother, more continuous flow of vehicles, enhancing overall driving efficiency and convenience, and enhance the efficiency of toll operations, valuation of road assets, attracting further investment in India's highway infrastructure. The new system will be helpful to detect vehicle theft and also track down speeding and crossing the signals vehicles.

The new GNSS-based toll system has been implemented from May 1, 2025, the toll charges isting FASTag system namely, pay for the distance travelled rather than the full toll distance; traffic congestion at the toll plaza, no worry about the RFID stickers having got malfunctioned or tampered with.

The new GNSS system would function as under:

- It would operate through satellite-based tracking, and eliminate the need for physical toll booths and FASTag scanners;
  - Every vehicle would be fitted with a government-approved GPS tracker, known as an On-Board Unit (OBU) device, a non-transferable device and so cannot be used in any other vehicle;
  - New GNSS system has a, *"zero user fee"* policy for trips up to 20 km either direction on toll roads, benefiting the car owner or drivers; and charge will be for the distance beyond initial 20 km, on a per-km basis; it will ensure to a *pay-as-you-go* system;
  - New GNSS system would require to have designated lanes for vehicles equipped with the OBU device for faster operation; and the vehicles entering this dedicated lane without a functioning OBU device would be required to pay double the standard fee applicable at that particular toll plaza[13];
  - Toll charges would be automatically calculated based on the distance traveled and would be debited directly from the driver's linked bank account or digital wallet;
  - New GNSS system will be paperless and hassle-free, transparent tolling experience across the nation; with lower reduced cost for the commuter and also lower operating cost for the government.

Since the *existing FASTag had been replaced by the new GNSS-based toll system with effect from May 1, 2025, it would require following changes by the travelers:*

- All vehicles must have a GNSS-compliant GPS device installed and activated;
- Payment method has to be linked with the GNSS tracker;
- Old RFID FASTag sticker has to be removed to avoid confusion;
- Vehicles GPS must be registered with the government's toll database to activate distance-based billing;
- Non-compliance of the above, or failure to switch over to the GNSS system after May 1, will attract penalties or travel restrictions on toll roads;

However, the new GNSS setup is designed to operate in conjunction with the existing FASTag system, to ensure a smooth transition for users.

TRAFFIC PRICES AND PROPOSED ALTERNATIVE TRANSPORT METHODS: RECENT DEVELOPMENTS

- ***Road Pricing, a toll for use of roads;*** under this system, charge is for the use of the road, i.e. the distance as well as the period for which the road is put to use, i.e. the charge for the distance traveled and also the time for which, the car is on the road, so as to avoid peak hours travel and to reduce traffic congestion or air pollution causing social problems;
- ***Electronic Road Pricing*** is to cover congestion as well as pollution; it is common among cities including, Singapore, Hong Kong, Milan, London, Stockholm. Congestion pricing plan[14] in New York City is an example to reduce traffic congestion and to raise funds for public transportation; the charges proposed under the plan is as under:
  - **Passenger vehicles: $15 per entry;**
  - **Small trucks** (e.g., box trucks, moving vans): $24;
  - **Large trucks**: $36;
  - **Motorcycles**: $7.50;
  - **Taxis** and rideshare services (e.g., Uber, Lyft): $1.25 surcharge per ride;
  - With certain happy hours, toll outside peak hours is reduced

OTHER ALTERNATIVE MODES OF TRANSPORT

- ***Delhi-Gurgaon Air Taxi service transport:*** In order to combat congestion and traffic, Indigo plans Delhi-Gurgaon Air Taxi service by 2026,

[13]Wisterian Watertree (2023), "Driving in Japan with Confidence: Read our Detailed Guide" Anne & Tony, (Japan Times), In Japan, toll booths have separate queues for prepaid or card holders and cash payers; non-observers of the queue system is penalized with extra charge as in Japan

[14]New York: State of Opportunities *Department of Transport) Congestion Program in New York/ MTA/Tolling

the expected flight time is seven minutes having estimated charges of around Rs. 2,000 to 3,000, while travel by road for the distance of 27 km distance takes about 90 minutes, with an approximate charge of Rs. 1500[15].

- ***400 New Ropeways are planned to Transform Mountain Travel: India's Infrastructure Leap are:*** The government plans to spend Rs. 1.25 lakh crore on 400 projects, as against 250 ropes projects last year; these projects are part of the "*Make in India*" campaign to encourage local production of ropeway parts[16].

CHALLENGES AND WAY OUT

Toll roads and road transport is the backbone of infrastructure; cost effective logistics necessitates efficient and effective toll road system to enhance trade and to increase tourism. Roads have to be well maintained, timely repaired to care of the potholes causing impediment for the commuters. For toll collection system to be effective, NHAI and administration have the responsibility to ensure that the concessionaire maintains toll roads and timely looks into its repair and maintenance. The need for timely intervention by higher authorities is illustrated by the following two cases as:

- In Kumba Lam toll plaza (NH-47), concessionaire did not maintain the road as the potholes, and impediments on the road caused immense hardship, injury and time loss to road users, the District Collector ordered stopping of toll collection till the agency repaired the damaged portion of the of the highway.
- Similarly, in Raipur-Drug (NH-6) Highway in Chhattisgarh on BOT (Toll), on the protests of commuters, the Court directed the concessionaire to deposit Rs. 11 crore to get the road repaired; the Court further directed and allowed the NHAI to use the deposited money for the repair of 26 km stretch of the highway. The Supreme Court on the denial of the liability by the concessionaire slashed the toll by 80% and said that the commuters have not to pay toll if the highway are damaged or poorly maintained[17].

No doubt toll revenue has increased over the years, new methods of toll collection, like FASTag and GNSS have been adopted, however, there are many challenges, in particular, administrative and behavioural issues relating to road transport management and toll collection system, these include, correct toll collection; maintain the designated lanes for OBU device for faster operation of vehicles; inefficiencies and pilferage by staff at toll booths; toll booths to be managed professionally; friendly behavior staff, etc. In order to overcome these challenges, the toll collection process should be systemized and streamlined, be fully automated and manual interventions be minimized.

Further, the architecture and design have to be such so as to avoid any possibility of vandalism and to keep the system uptime nearly 100%. With the advanced technology, regulatory authorities and administration could ascertain on-line when the queues at toll booths get longer, and the commuters are required to spend more time for toll payments. The point to note is: we should not wait till the commuter takes the situation in their own hands, like in earlier situations such as Delhi - Gurugram toll, or Noida toll bridge, where toll had to be ultimately withdrawn.

- No doubt, there should be separate queue for those in exempt category;
- Staff to observe dress code and be trained in people management

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[15]Tushar Kelshikar. Interglobal Enterprise, April 20, 2024.

[16]400 New Ropeways in 5 Years to Transform Mountain Travel: India's Infrastructure Leap; https://www.msn.com/com/en-in/travel/news/400-new-ropeways-in5 -yearsto transform-travel-in india-5

[17]Dhameja and Dhameja (2016), 178- 82, ibid.

Training Needs among the Biomedical Healthcare Professionals: Issues and Interventions

Sujatha Sony Onattu*, Hardik Shah**

ABSTRACT

The rapid growth of the Indian biomedical healthcare industry has significantly enhanced the demand for a skilled and competent workforce, particularly in hospital settings. Despite this expansion, there is limited empirical research focusing on employment structures and regional training needs of biomedical healthcare professionals. This study examines the employment composition, priority training needs, and key competency dimensions of healthcare professionals working in hospitals in Ahmadabad, Gujarat. The findings reveal those communication skills, patient handling, technical competence, stress management, and safety training are critical areas of development. Four major competency dimensions were identified: clinical-technical competency, interpersonal and patient-centric skills, organizational-managerial capability, and safety and sustainability orientation. ANOVA results indicate significant differences in training priorities across hospital types. The study highlights the need for structured, role-specific, and context-based training interventions to enhance workforce capability and organizational sustainability.

KEYWORDS

Clinical Competency, Employment Structure, Hospital Workforce, Skill Development, Types of Training

INTRODUCTION

The Indian healthcare sector has experienced significant growth over the past decade, expanding at an estimated annual rate of approximately 12 percent, and emerging as one of the leading segments within the service industry (Mehta & Onattu, 2022). Gujarat, particularly Ahmedabad, has developed as a prominent hub for medical tourism in western India, supported by the rapid expansion of corporate hospitals and private healthcare facilities (Mehta & Onattu, 2019; TOI, 2026). This growth has been driven by factors such as globalization, technological advancements, increasing health awareness, and policy initiatives including the National Health Policy (2017).

The biomedical healthcare industry has consequently emerged as one of the most dynamic components of India's service sector. Hospitals, as the core institutions within this industry, are highly dependent on human capital, where employee competence directly influences service quality, patient safety, and overall organizational sustainability. In Gujarat, especially in Ahmedabad, there has been substantial growth in hospital infrastructure, medical tourism, and allied healthcare services, leading to an increased demand for a diverse workforce comprising doctors, nurses, biomedical engineers, technicians, administrators, and support staff.

Despite this rapid expansion, the development of workforce capabilities has not kept pace with industry growth. Hospitals often rely on contractual and part-time staffing arrangements and adopt cost-containment strategies, which may result in fragmented and ad hoc training practices. Such

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approaches can adversely affect service quality and long-term organizational performance. Available statistics indicate a significant workforce base, including approximately 42,285 doctors and 17,551 nurses, along with a large number of technical and support staff, highlighting the scale and importance of human resource development in the sector.

Furthermore, Gujarat holds considerable potential to strengthen its position as a leading destination for medical tourism, particularly across major cities such as Ahmedabad, Surat, Vadodara, and Rajkot (Rana & Bhayani, 2015; Rami & Solanki, 2017). At the same time, workforce challenges persist, including gender disparities, as women constitute nearly 70% of the healthcare workforce but are often concentrated in lower-paid and lower-status roles (Ghebreyesus, 2019). Although existing literature emphasizes the importance of training and development in healthcare organizations, most studies focus on specific professional groups or specialized contexts, such as emergency care. There is limited empirical research addressing comprehensive employment structures and training needs at a regional level, particularly for biomedical healthcare professionals. Additionally, there is a lack of evidence regarding preferred training modes, institutional training providers, and organizational constraints influencing training decisions within hospitals.

Against this backdrop, the present study aims to analyze the employment structure and training needs of biomedical healthcare professionals working in hospitals in Ahmedabad. The specific objectives of the study are:

- To analyze the priority training needs of biomedical healthcare professionals working in hospitals in Ahmedabad.
- To identify key competency dimensions and examine variations in training priorities across hospital types, with a view to suggesting appropriate training interventions.

The paper is organized as follows: Section 2 reviews the relevant literature and identifies research gaps; Section 3 describes the data and methodology; Section 4 presents the empirical analysis using descriptive and inferential statistics; and Section 5 concludes with implications and recommendations.

REVIEW OF LITERATURE

In the context of rapid technological advancements, the business environment has become increasingly competitive, requiring organizations to continuously adapt to changing market dynamics and customer expectations. Globalization and evolving service demands have intensified the need for organizations to invest in the continuous training and development of their workforce. Employee training not only enhances individual capabilities but also contributes significantly to organizational effectiveness, as employees become better equipped to handle complex work-related challenges (Salami *et al*., 2022).

Training and development are widely recognized as strategic human resource practices, particularly in healthcare organizations operating in developing economies characterized by skill shortages and resource constraints. Organizational performance is closely linked to the availability of competent and skilled employees, whose effectiveness depends on their ability to apply relevant knowledge and skills in their respective roles. Training initiatives not only improve employee competence but also facilitate career advancement, enhance quality of work life, and contribute to overall organizational growth (Karim, Choudhury, & Latif, 2019; Gagan, Senthilkumar, & Nallusamy, 2018).

In developing countries, the provision of need-based training and continuous professional education is particularly critical. Healthcare institutions must prioritize structured training programs that address the specific needs of their workforce to improve service delivery and patient outcomes. However, training alone may not guarantee improved performance, as it interacts with other organizational factors such as work environment, motivation, and resource availability (Gadalia & Mukhtad, 2021). Prior research highlights that training in healthcare should extend beyond technical competencies to

include soft skills such as communication, stress management, ethical conduct, and patient-centered care (Ramanayake *et al*., 2015; Bukhari & Iraqi, 2021). This multidimensional approach to training is essential in ensuring holistic workforce development in healthcare settings.

Several studies emphasize the importance of systematic Training Needs Analysis (TNA) frameworks in identifying competency gaps and prioritizing training interventions. Among these, the Hennessy–Hicks model has been widely applied in healthcare contexts to assess discrepancies between required and existing competencies (Markaki *et al*., 2021). Empirical evidence suggests that training programs based on structured TNA frameworks significantly improve employee performance, job satisfaction, and service quality (Jha *et al*., 2020; Gadalia & Mukhtad, 2021).

In addition, TNA tools play a crucial role in addressing the "knowing–doing" gap by facilitating the effective translation of knowledge into practice. These tools enable organizations to systematically evaluate competencies related to knowledge, skills, responsiveness, and service delivery, thereby providing valuable insights into employee performance and behavioural outcomes. Furthermore, TNA supports the design of targeted and role-specific training interventions, contributing to continuous professional development within healthcare organizations.

Training programs also serve as an important motivational factor, enhancing employee engagement and improving job performance. With the increasing pace of technological innovation and organizational restructuring, training has become essential for maintaining workforce adaptability and improving service efficiency (Gadalia & Mukhtad, 2021). Studies have also highlighted the importance of continuous medical education and simulation-based training in reducing medical errors, improving clinical outcomes, and enhancing the overall quality of healthcare services (Omukeeva *et al*., 2021).

Despite the growing body of literature, existing research remains fragmented, often focusing on specific professional groups such as nurses or emergency care staff. This limits a comprehensive understanding of training needs across the entire hospital workforce. Moreover, studies indicate that training needs are not systematically identified in both public and private hospitals, with private sector institutions often under investing in structured training programs despite rapid growth (Jha, Pandey, & Parihar, 2020; Onattu, 2005; Srinivasan & Chandwani, 2014). Furthermore, there is a lack of empirical research that integrates employment structure, training needs, and regional preferences across different categories of healthcare professionals. The present study addresses this gap by providing a comprehensive and region-specific analysis of training needs within the biomedical healthcare sector in Ahmedabad, thereby contributing to both academic literature and effective workforce planning.

RESEARCH METHOD

The present study adopts a descriptive and analytical research design to examine the employment structure and training needs of biomedical healthcare professionals. Primary data were collected from healthcare workers employed in private, public, and trust-based hospitals located in Ahmedabad. A structured questionnaire, based on the Hennessy and Hicks (1998) Training Needs Analysis (TNA) framework, was administered to a sample of 168 respondents. The respondents were selected using a judgmental sampling technique to ensure the inclusion of individuals possessing relevant experience in the biomedical healthcare sector. Only those respondents who had a minimum of one year of work experience were considered for the study, thereby ensuring informed and reliable responses.

The questionnaire was designed to capture information on demographic characteristics, employment structure, manpower planning constraints, and training needs across various categories of healthcare professionals. It also included items related to preferred training methods, desired knowledge and

skill areas, acceptable training duration and travel distance, and organizational willingness to invest in training. Responses to attitudinal statements were measured using a five-point Likert's scale, ranging from 1 (least important) to 5 (most important/ required). The sample distribution indicated that 74.4% of respondents were from private hospitals, 13.7% from government hospitals, and 11.9% from trust-based hospitals.

To ensure analytical rigor, both descriptive and inferential statistical techniques were employed. Descriptive statistics, including means, percentages, and rankings, were used to summarize training needs and preferences. Inferential analysis was conducted using One-way Analysis of Variance (ANOVA) to examine differences in training priorities across different types of hospitals. Furthermore, Exploratory Factor Analysis (EFA) was applied to identify underlying competency dimensions associated with training needs.

RESULTS

In Ahmedabad, hospitals were observed to exhibit distinct patterns based on descriptive statistical analysis. The findings indicate a predominant reliance on contractual staffing arrangements, reflecting underlying cost pressures and the need for workforce flexibility. With regard to training needs, the highest mean scores were recorded for doctors (Mean = 3.95), followed by consultants (Mean = 3.91) and managerial staff (Mean = 3.89). Nurses and administrative staff demonstrated comparatively lower, yet significant, training requirements within the selected sample.

These results highlight the strategic importance of continuous professional development across both clinical and managerial domains. Furthermore, key areas of training priority were identified as communication skills, patient handling, technical efficiency, stress management, and emergency preparedness, each reporting mean scores exceeding 4.0 on a five-point Liker scale (Table 1).

Table 1: Training Priority areas

Training Areas	Mean	Std. Deviation
Communication skills	4.21	0.61
Motivational skills	4.18	0.62
Technical skills	4.14	0.63
Safety training (epidemics & emergencies)	4.13	0.64
Dealing with patients	4.12	0.67
Problem-solving skills	4.12	0.69
Quality of service	4.10	0.66
Computer education	4.08	0.71
Stress management & counseling	4.07	0.73
Waste management	4.06	0.72
Critical incident handling	4.01	0.72
Hospital management & finance	3.99	0.05
Cost reduction	3.94	0.72
Green practices & compliance	3.88	0.53

Exploratory Factor Analysis (EFA) using Principal Component Analysis (PCA) with Varimax rotation was conducted on 14 training-need variables. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was found to be 0.81, and Bartlett's Test of Sphericity was statistically significant ($p < 0.001$), indicating the appropriateness of the data for factor analysis. Four factors with eigenvalues greater than 1 were extracted, collectively explaining 68.1% of the total variance. The identified factors were categorized as follows (Tables 2 and 3):

- ***Clinical Competency:*** comprising technical skills, emergency preparedness, and critical incident handling.
- ***Interpersonal and Patient-Centric Skills:*** including communication, patient handling, and motivation.
- ***Organizational and Managerial Capability:*** encompassing hospital management, cost control, and business planning.
- ***Safety, Ethics, and Sustainability Orientation:*** consisting of waste management, green practices, and regulatory compliance.

These factor groupings provide a structured understanding of the key dimensions underlying training needs in the healthcare sector. They provide

a structured understanding of training needs beyond isolated skill listings.

Table 2: KMO and Bartlett's Test of Sphericity

Measure	Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.81
Bartlett's Test of Sphericity – Approx. Chi-Square	1245.37
Df	153
Sig.	0.000

Table 3: Total Variance Explained (Exploratory Factor Analysis)

Factor	Eigen value	% of Variance	Cumulative %
1	5.11	28.3	28.3
2	3.13	17.6	45.9
3	2.20	12.1	58.0
4	1.84	10.1	68.1

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Table 4: Rotated Component Matrix (Factor Loadings)

Training Areas	Factor 1	Factor 2	Factor 3	Factor 4
Technical skills	0.80	—	—	—
Safety Training (epidemics & emergency)	0.77	—	—	—
Critical incident handling	0.74	—	—	—
Dealing with patients	—	0.83	—	—
Communication skills	—	0.81	—	—
Motivational skills	—	0.76	—	—
Problem solving Skills	—	0.70	—	—
Stress Management & Counseling	—	0.69	—	—
Hospital management & finance	—	—	0.80	—
Cost reduction	—	—	0.76	—
Quality of Service	—	—	0.75	—
Waste management	—	—	—	0.78
Green practices & compliance	—	—	—	0.75
Computer Education	—	—	—	0.72

Loadings < 0.50 suppressed for clarity.

Factor Labels

- ***Factor 1:*** Clinical–Technical Competency
- ***Factor 2:*** Interpersonal & Patient-Centric Skills
- ***Factor 3:*** Organizational & Managerial Capability
- ***Factor 4:*** Safety, Ethics & Sustainability Orientation

A one-way Analysis of Variance (ANOVA) was conducted to examine differences in training priorities across hospital types (private, public, and trust-based). The results revealed statistically significant differences ($p < 0.05$) in the clinical–technical and managerial competency factors. Specifically, private hospitals reported a significantly higher emphasis on training in these domains compared to public hospitals, likely reflecting greater competitive pressures and the need for service differentiation (Tables 4 and 5).

Table 5: One-Way ANOVA- Training Competency Factors by Hospital Type

Factor	Hospital Type	Mean	F-value	Sig.
Clinical–Technical Competency	Private	4.11	4.87	0.009
	Public	3.77		
	Trust	3.80		
Interpersonal Skills	Private	4.16	2.13	0.119
Organizational–Managerial	Private	4.04	3.94	0.020
Safety & Compliance	Public	4.07	1.86	0.151

$p < 0.05$ indicates statistically significant difference

Managerial Implications and Suggested Interventions

The subsequent analysis of data and empirical findings (Table 6) has important implications for hospital administrators and human resource managers within the biomedical healthcare industry. The results clearly indicate that training requirements in hospitals are multidimensional and cannot be effectively addressed through fragmented or ad hoc initiatives. Instead, there is a need for a structured, systematic, and role-based training framework

Table 6: Aligning Findings with Proposed Interventions

Key Findings	Managerial Implications	Proposed Interventions
Employers show cost sensitivity; 22.6% are unwilling to pay for training, while only a small proportion support high-cost programs.	Training budgets are constrained, requiring efficient allocation of resources.	Emphasize cost-effective in-house training, pooled inter-hospital programs, and selective funding for high-impact external courses.
Majority of training is delivered in offline mode (75%); limited use of online mode (25%).	Face-to-face learning remains preferred, but exclusive reliance on offline training limits scalability and flexibility.	Adopt blended learning models combining classroom workshops with webinars, video conferencing, and digital learning modules.
High preference for informative videos, conferences, offsite training, webinars, and short-term courses.	Employees value structured, interactive, and professionally facilitated learning formats.	Use a mix of conferences, workshops, simulations, videos, and short-term certification courses aligned with job roles.
Maximum respondents (38.7%) prefer to travel 51–100 km for training; longer distances are least preferred.	Training should be conducted outside the organization but within manageable travel limits.	Establish regional training hubs and offsite training facilities within 50–100 km to minimize travel fatigue and time loss.
In-house HR departments and international agencies are rated most appropriate training providers.	Internal HR units are trusted for operational training, while external expertise is valued for advanced learning.	Strengthen in-house HR training capacity and collaborate with international agencies, vocational institutes, and industry partners.
Lower preference for external counsellors and university extension centres.	Training is expected to be practice-oriented rather than purely academic or advisory.	Focus partnerships on industry-linked, application-driven training providers rather than generic academic extensions.

designed to enhance workforce effectiveness and improve the overall quality of healthcare services.

It is further recommended that hospitals periodically undertake systematic Training Needs Assessments (TNA) using established tools to identify emerging competency gaps. Such an approach would ensure that training interventions remain current, evidence-based, and aligned with organizational objectives. Additionally, hospitals should design role-based, modular training programs tailored to specific categories of employees, including doctors, nurses, technicians, administrators, and support staff. The four identified competency dimensions should be integrated into these modules, enabling targeted skill development while minimizing excessive workload and cost implications. Furthermore, it is essential for hospitals to emphasize talent development and leadership growth initiatives. Strengthening capabilities in resource utilization, decision-making, and team coordination will contribute significantly to overall organizational effectiveness and improved healthcare delivery.

CONCLUSION

The study concludes that training in the biomedical healthcare sector must be systematic, structured, and aligned with evolving industry demands. Beyond technical competencies, there is a growing need to focus on interpersonal skills, managerial capabilities, and safety compliance. The findings provide a practical framework for designing role-specific training interventions, thereby contributing to improved service quality and organizational sustainability. Future research may explore longitudinal training outcomes and comparative studies across regions.

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* * *

Short Article

Communication 01

Artificial Intelligence: Transforming the Way We Live and Work

Santosh Dhar*, Upinder Dhar**

ABSTRACT

Artificial Intelligence (AI) refers to the ability of machines and computer systems to perform tasks that typically require human intelligence. These tasks include learning from experience, recognizing patterns, understanding language, solving problems, and making decisions. AI has rapidly evolved over the past few decades, becoming a central part of modern technology. One of the key branches of AI is machine learning, where systems are trained on large datasets to improve their performance over time without being explicitly programmed for every task. Another important area is natural language processing, which enables computers to understand and generate human language, making tools like chatbots and virtual assistants possible.

KEYWORDS

Adaptability, Critical Thinking, Emotional Intelligence, Empathy, Lifelong Learning

AI is widely used across industries. In healthcare, it helps in diagnosing diseases and analyzing medical images. In finance, it detects fraud and automates trading. In transportation, AI powers self-driving vehicles and traffic management systems. It is also used in entertainment, education, and customer service. AI is transforming the way we live and work. It offers immense potential to improve efficiency and innovation and its rapid rise has created many opportunities globally creating labor efficiencies through automated tasks. However, critical human skills; creativity, emotional intelligence, critical thinking, and complex problem-solving have also become more valuable than ever, shifting from technical, routine-oriented abilities to high-level, uniquely human capabilities. AI complements, rather than fully replaces, these skills by automating data processing and pattern recognition, allowing people to focus on strategy, empathy, and innovation.

CRITICAL THINKING AND JUDGMENT

Critical thinking can be seen as having two components: a set of information and belief generating and processing skills, and the habit, based on intellectual commitment, of using those skills to guide behavior. It is thus to be contrasted with the mere acquisition and retention of information alone, because it involves a particular way in which information is sought and treated; the mere possession of a set of skills, because it involves the continual use of them; and the mere use of those skills ("as an exercise") without acceptance of their results. Critical thinking varies according to the motivation underlying it. When grounded in selfish motives, it is often manifested in the skillful manipulation of ideas in service of one's own, or one's groups', vested interest.

As such it is typically intellectually flawed, however pragmatically successful it might be. As AI tools

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generate content, people must act as "truth filters," evaluating information for bias, accuracy, and ethical implications. Critical thinking is the ability to analyze information logically, evaluate evidence and sources, identify assumptions or biases, compare alternative explanations, make reasoned decisions AI can assist with these processes by processing large amounts of information quickly and highlighting patterns or inconsistencies.

CREATIVITY AND INNOVATION

Generating original ideas and contextual understanding remains a uniquely human trait. Research has proved that creativity is common among the human species and all have talent in varying degrees at birth. Entrepreneur is primarily concerned in developing a new product, processing the market and needs to have the ability to break through the tough market. Entrepreneurial creativity has been defined as the generation and implementation of novel, suitable ideas to establish new venture, which remixes existing patterns.

Artificial Intelligence is rapidly reshaping how we think about creativity and innovation. Once considered uniquely human traits, creativity and problem-solving are now being augmented and in some cases transformed by intelligent machines. Rather than replacing human ingenuity, AI acts as a powerful collaborator, enabling new forms of expression and accelerating the pace of discovery. In creative fields such as art, music, and writing, AI tools can generate ideas, suggest patterns, and even produce complete works. This allows creators to explore possibilities they might not have imagined on their own. For instance, designers can use AI to quickly prototype concepts, while writers can overcome creative blocks with AI-generated prompts or drafts. The result is a more dynamic and iterative creative process. Innovation, too, benefits greatly from AI.

By analyzing vast amounts of data, AI can uncover hidden insights, predict trends, and optimize solutions. Industries like healthcare, engineering, and business use AI to develop new products, improve efficiency, and solve complex problems faster than ever before. What once took years of research can now be achieved in a fraction of the time. However, the rise of AI also raises important questions about originality, ethics, and ownership. As machines become more involved in the creative process, it becomes essential to define the role of human input and ensure responsible use of technology. AI is not a replacement for human creativity but a catalyst for it. By combining human imagination with machine intelligence, we are entering an era of unprecedented innovation, one where creativity is amplified, not diminished.

EMOTIONAL INTELLIGENCE AND EMPATHY

Understanding and managing emotions to build rapport and collaboration cannot be fully replicated by technology. AI is increasingly intersecting with emotional intelligence and empathy, qualities traditionally seen as deeply human. Emotional intelligence involves understanding, recognizing, and managing emotions, both in ourselves and others. While AI does not "feel" emotions, it can be designed to detect and respond to them in meaningful ways. Modern AI systems can analyze facial expressions, voice tones, and language patterns to identify emotional states. This has led to the development of empathetic technologies such as virtual assistants, mental health chatbots, and customer support systems that adapt their responses based on a user's mood.

For example, AI in healthcare can offer supportive communication to patients, while in education it can adjust teaching styles according to students' emotional needs. However, AI's empathy is simulated, not genuine. It relies on data and algorithms rather than lived experience or true emotional understanding. This raises ethical concerns about trust, privacy, and the potential misuse of sensitive emotional data. There is also a risk that over-reliance on AI for emotional support could reduce human-to-human interaction. Despite these challenges, AI can enhance human empathy when used responsibly. It can help people become more aware of emotions, provide timely support, and improve communication

across cultures and contexts. While AI cannot truly feel empathy, it can support and extend our capacity for emotional intelligence. The key lies in using AI as a tool to strengthen human connection, rather than replace it.

ADAPTABILITY AND LIFELONG LEARNING

As the professional landscape continues to evolve rapidly, the need for adaptability and lifelong learning has become crucial for individuals to thrive in the workplace. In today's dynamic and fast-paced world, being able to adapt to change and continually learn and grow has become essential for career success. interplay of adaptability and lifelong learning, and the strategies to enhance these skills, greatly impacts the workplace success. Adaptability refers to the capacity to adjust and respond effectively to changes, challenges, and new contexts. Adaptability is not just about being open to change; it goes beyond that. It involves being proactive, flexible, and resilient when faced with new situations or unexpected obstacles. It requires the ability to embrace innovation, embrace ambiguity, and navigate uncertainty with confidence. The rapid evolution of technology demands a flexible mindset and a willingness to continuously improve.

COMPLEX COMMUNICATION

AI is revolutionizing complex communication by offering advanced personalization, real-time language translation, and strategic content generation, while improving efficiency in workplaces and customer service. AI tools assist with organizing thoughts, summarizing data, and analyzing sentiment, yet challenges remain in interpreting nuanced emotional context, sarcasm, and ensuring ethical, unbiased interactions. AI can revolutionize how your organization personalizes communication by creating highly tailored user experiences. Combining machine learning with generative AI allows you to craft real-time content, recommendations, and interactions that adapt to your customers' preferences and behaviors. Providing this level of personalization improves their satisfaction and drives your organization's success, such as higher customer engagement and conversion rates.

These rapid changes also raise profound ethical concerns. These arise from the potential AI systems embed biases, contribution to climate degradation, threatening human rights and more. Such risks associated with AI have already begun to compound on top of existing inequalities, resulting in further harm to already marginalized groups. At its heart, the ethics of AI revolves around how to ensure that systems designed to optimize efficiency, prediction, and automation remain aligned with human dignity, fairness, and democratic values? It is about making sure intelligent systems are designed and used in ways that are fair, safe, transparent, and aligned with human values. Learning in the age of intelligence is not about competing with machines, it is about complementing them. The future belongs to those who cultivate distinctly human strengths while mastering intelligent tools. It requires responsible development and regulation to ensure it benefits society. The ultimate goal is not smarter machines alone, but wiser humans.

* * *

Short Article

Communication 02

Training and Human Resource Development in the Age of Artificial Intelligence

Arun D. Sinha*

ABSTRACT

Conventional training models were designed for stable job roles and predictable skill requirements. In contrast, artificial Intelligence (AI) accelerates job redesign and shortens the life cycle of skills. As a result, human resource development (HRD) must move from periodic skill-based training to continuous capability development. Human capabilities such as learning agility, critical thinking, creativity, collaboration, and emotional intelligence are becoming more valuable, as they complement rather than compete with intelligent machines. AI-enabled learning systems allow personalized and adaptive training at scale. Learning platforms can assess individual competency gaps and deliver customized content through microlearning, simulations, and digital coaching. This enables learning to be embedded within daily work, shifting HRD's role from content delivery to learning design, curation, and governance.

KEYWORDS

Business Alignment, Decision Support, Digital Literacy, Learning Habits, Trust Building

Continuous reskilling has become a strategic necessity. Automation may displace routine tasks while creating new hybrid roles that combine domain expertise with digital and analytical skills. Human resource development (HRD) must therefore align closely with business strategy, technology adoption plans, and workforce forecasting to ensure timely upskilling and redeployment of talent. The role of trainers and HR professionals is also evolving. Trainers increasingly act as facilitators, mentors, and change enablers rather than traditional instructors. Human resource (HR) leaders must develop literacy in artificial Intelligence (AI), data analytics, and ethics to manage technology responsibly while maintaining employee trust and engagement. Ethical considerations are central to AI-driven HRD. Issues of bias, transparency, and data privacy require deliberate attention. Ultimately, effective HRD in the age of AI focuses on enabling humans to work alongside intelligent systems—preserving judgment, values, and creativity as core organizational strengths.

CAPACITY BUILDING ACROSS ORGANIZATIONAL LEVELS

1. Junior Level (Entry-Level & Frontline Employees)

Focus: Digital readiness, task efficiency, and learning agility

Examples of Capacity Building

- ***AI-assisted task execution:*** Training employees to use AI tools (chatbots, copilots, automated dashboards) for routine tasks such as data entry, reporting, customer interaction, or basic analysis.
- ***Digital literacy & data awareness:*** Understanding how data is generated, used, and interpreted; basic familiarity with dashboards, analytics outputs, and AI recommendations.

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- ***Problem-solving with tools:*** Learning to frame clear questions and prompts for AI systems to improve productivity and decision quality.
- ***Adaptability & continuous learning habits:*** Short microlearning modules, self-paced certifications, and rotation-based exposure to multiple functions.
- ***Ethical awareness:*** Basic training on data privacy, responsible AI use, and human accountability in automated processes.

Outcome: Faster onboarding, higher productivity, and confidence in working alongside AI-enabled systems.

2. Middle Level (Supervisors, Managers, Functional Specialists)

Focus: Decision-making, integration, and people leadership

Examples of Capacity Building

- ***AI-enabled decision support:*** Using predictive analytics, forecasting tools, and scenario models to plan operations, manage resources, and optimize processes.
- ***Human-AI collaboration management:*** Learning how to allocate work between people and machines while maintaining quality, accountability, and motivation.
- ***Change and transition leadership:*** Managing reskilling initiatives, redeploying teams, and addressing employee concerns related to automation.
- ***Cross-functional systems thinking:*** Understanding how AI adoption in one function impacts others (HR, operations, supply chain, finance).
- ***Bias and risk management:*** Interpreting AI outputs critically and recognizing algorithmic limitations or unintended consequences.

Outcome: Better-informed decisions, smoother technology adoption, and resilient team performance.

3. Senior Level (Leaders, Executives, Policy Makers)

Focus: Strategy, governance, and long-term value creation

Examples of Capacity Building

- ***AI strategy and business alignment:*** Understanding where AI creates real-value versus hype, and prioritizing investments accordingly.
- ***Workforce and future skills planning:*** Anticipating skill shifts, redesigning roles, and shaping long-term talent strategies.
- ***Ethical governance and oversight:*** Establishing policies for transparency, accountability, and responsible AI use across the organization.
- ***Culture and trust building:*** Leading with empathy, communicating purpose, and ensuring technology adoption strengthens—not erodes—human engagement.
- ***Outcome:*** Sustainable competitiveness, ethical leadership, and human-centered AI transformation.

As a user of artificial intelligence, I feel information, analyzed data on any subject including the source of information and solution becomes readily available shortening the time and work-load or manpower needed. However, that does not mean that you accept whatever is suggested. At all levels of any organization, one needs to strengthen ones faculty of critical reasoning.

* * *

Thousands of years of telling stories have shaped our brains such that we instinctively process information and remember better via stories. Therefore, it is not surprising that story telling is one of the most powerful communication tools. Storytelling is increasingly being used, in addition to case studies, by faculty in institutions of higher learning to engage their learners and make the lessons easily understandable and more memorable for them. One can imagine all the things and experience everything narrated by the faculty. But, it depends on the story teller how creative he/she is? It also helps to shape better citizens by connecting the students with many moral-based stories.

Breaking through the Walls

Story 01

Vibhakar Ramtirthkar*, Chaitali Pande, Bernadette D'Silva***, Nidhi Dubey******

Ravi, Neha, and Priya were students at an esteemed MBA college, known for its rigorous curriculum and the innovative teaching approach of Prof. Chaitali Pande. Prof. Pande believed in learning by doing and storytelling, making her classes an experience student looked forward to. But, everything changed when the government announced the nationwide Janta Curfew, and the campus, once bustling with energy, fell silent. Initially, everyone thought it was just a temporary disruption. But when the lockdown extended, the students realized their college life was never going to be the same.

Ravi: *"I can't believe that we have to do everything online now. I never thought a laptop would become my only link to the outside world."*

Neha: *"I know, right? And the worst part is that I keep losing connection. It's like my laptop is on strike every time when we have an important class."*

Priya: *"It's not just the internet, though. My laptop is old, and half the time it freezes in the middle of a presentation. And forget about attending the virtual study groups; my phone battery dies before we even start."*

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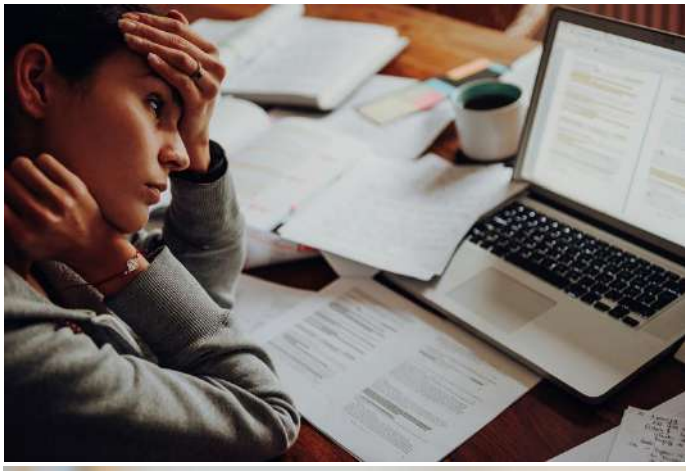

The trio sat in their separate rooms, staring at their screens, trying to make sense of their new reality. They had grown up in an age where everything was automated, but they had taken for granted the smooth integration of technology into their daily lives. Now, they were facing an unexpected challenge: staying productive without letting technical barriers consume them.

One afternoon, Prof. Pande appeared on their screens for a live session. The students' initial excitement was tempered by the uncertain stability of their connections. The first few minutes were filled with stutters and frozen frames, leaving the trio anxiously trying to refresh their browsers.

Prof. Pande: *"Can everyone hear me? It seems we're experiencing some technical issues today,"* she said, her face partially pixelated. She sighed, the hint of frustration evident in her voice.

Neha: *"Here we go again,"* she muttered, shaking her head.

Ravi: *"Give it a minute. Maybe it'll clear up."*

After a few moments, the screen flickered and stabilized, and Prof. Pande's voice resumed, clearer than before.

Prof. Pande: *"I know this shift has been tough, and these technical barriers are like invisible walls. But remember, what defines us isn't how we respond to smooth sailing—it's how we adapt when the storm hits. Today, I want to share a story about adapting to unforeseen challenges."*

The trio leaned forward, their frustration momentarily forgotten as they listened intently.

Prof. Pande's voice carried over the crackle of the connection as she told the story of her own college days when technology was not yet an integral part of education. "In my time, we didn't have laptops or smartphones. Our classrooms were filled with the sounds of pen scratching on paper, and the hum of fluorescent lights. But when the power went out—oh, that was chaos! We had to rely on candles and flashlights, and our professors had to get creative. It was in those moments, when things broke down, that we learned how to find solutions."

'She added another story, "Imagine you're in a pot of boiling water," she said. "The heat is unbearable, the pressure relentless. Now, you have three choices. You could be like the potato—soft and crumbling under the weight of adversity. Or the egg—hard, rigid, and unyielding, shutting yourself off from growth. But then," she paused, with her expression brightening she said, "*there's the coffee bean. The coffee bean doesn't surrender to the boiling water. It transforms the water, turning adversity into opportunity*."

The trio nodded their eyes wide with realization. They were facing a modern version of that very challenge.

The days turned into weeks, and the trio's struggles continued. Ravi's laptop would suddenly shut down mid-class, leading to missed lectures and frantic attempts to catch up.

Ravi: *"This is driving me crazy. I can't focus on anything if I'm constantly checking to see if my laptop's going to freeze."*

Neha, sitting in her room surrounded by half-empty notebooks, felt a surge of frustration every time her internet failed during group projects.

Neha: *"I can't believe this. Every time I'm about to start working, my internet drops, and I have to restart everything. It's like I'm stuck in a loop."*

Priya, who was usually the more composed of the three, found herself confronting her own set of issues. Her old phone, struggling to keep up with video calls and class notes, had begun to act up.

Priya: *"My phone's battery is dead before I even finish half the day. How am I supposed to be productive like this?"*

Ravi: *"We need to find a way to work around these barriers. Maybe we should meet in person to share notes and help each other out when things go wrong?"*

Neha looked up, the suggestion sparking hope.

Neha: *"Yes, but what if we take it a step further? Let's create a schedule where we take turns hosting Zoom meetings with backup connections, so someone is always there to help."*

Over the next few weeks, the trio adjusted their routines. Ravi invested in a backup power bank and a cooling pad for his laptop. Neha set-up a system for checking her internet connection before each session and started saving key documents offline. Priya started using her old phone only for emergencies and bought a simple notebook for class notes.

Their cooperation transformed their chaotic days. The once overwhelming challenges of connectivity became manageable, and their classes, although still difficult, became more fruitful. The trio found themselves contributing more actively during online discussions and helping others navigate their technical struggles.

One day, during a class on leadership and crisis management, Prof. Pande asked them to share their experiences.

Ravi: *"At first, I felt like technology was against me. But when I started planning ahead and finding solutions, I realized we could handle it. It's all about adaptability."*

Neha: *"And supporting each other. When we worked together, it wasn't just about fixing tech problems—it was about building resilience."*

Priya: *"I've learned that we're stronger than we think. The real challenge is not just the technical barrier but how we respond to it."*

Prof. Pande: *"That's exactly right,"* she said, a proud smile spreading across her face. *"This is the lesson of these times: when the world shifts, we must shift with it, not just to survive, but to thrive."*

As the class ended, the trio logged off, their screens flickering to black. For the first time in months, Ravi, Neha, and Priya felt the weight of the challenges lift, replaced by a quiet confidence. They knew that no matter what the future held, they were ready to face it—not as victims of circumstance, but as masters of their response.

(Moral: Technical barriers and challenges may disrupt our routines, but our adaptability and creativity define our growth. Innovate, support one another, and find solutions to turn obstacles into opportunities).

* * *

The Silent Storm

Deepti Verma*, Sachin Gupta, Hemlata Agarwal*****

INTRODUCTION

For 25 years, Harmony College had been a beacon of excellence and unity, growing into a prestigious university where faculty and staff worked together like family. There was a time when no one even thought of leaving—the environment was supportive, leadership was empathetic, and employees felt valued both financially and emotionally. It was more than just a workplace; it was a community built on trust, collaboration, and shared goals.

However, things have changed. As the college expanded into a new state private university, joining 8 different well-established institutions under one umbrella, the warmth that once defined its culture began to fade. Employees' frustration escalated due to unmet deadlines, communication gaps, lack of support, work pressure grew relentlessly, driven by mounting expectations from leadership. The cohesiveness that had been the institution's strength disintegrated, replaced by an atmosphere of silent competition and guarded conversations.

Decisions were made in closed-door meetings, and employees felt increasingly unheard. In the first 5 years, the new university concentrated on building physical infrastructure in this process the faculty issues were undermined as physical infrastructure got mired and faculty issues further put in the back burner. Monetary and non-monetary benefits stagnated, and the recognition that once boosted morale disappeared. Cost-cutting measures became the norm, straining resources and pushing faculty to their limits. Empathy, once a hallmark of the leadership team, was now a distant memory. Whispers of dissatisfaction echoed through the corridors, but no one expected the storm that was about to break. Then, without warning, came *The Unexpected Resignations.*

SCENE: UNIVERSITY CAMPUS, MORNING

The bustling corridors of the university were filled with students discussing upcoming exams. Dr. Alia, a respected Assistant Professor of Economics, hurriedly made her way to the Dean's office, her face reflecting deep worry. Holding a resignation letter, she took a deep breath before knocking. She was thirty-six, with fourteen years of teaching behind her and a manner that students described, in their informal ratings, as "strict but she actually cares."

Dean's Office: *Dean Rajan looks up from a stack of examination schedules.*

Dean Rajan: Dr. Alia! Come in. You look troubled. What brings you here so urgently?

Dr. Alia: *Hands over the resignation letter with trembling hands.* Sir, I need to resign... effective immediately.

Dean Rajan: *Surprised, Effective* immediately? This is extremely sudden. You know the rules—three months' notice is mandatory.

Dr. Alia: I know, sir, but it's a personal crisis. My husband had a health setback last night, and I need to be with my family.

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Dean Rajan: I'm truly sorry to hear that. But you're handling vital roles—academics, examination coordination, and you're even overseeing the student grievance committee. Your departure now could create chaos.

Dr. Alia: I've been balancing these responsibilities as best as I could. But recently, I've faced mounting pressure. Some internal conflicts with senior faculty over examination protocols, and…….

Dean Rajan: Wait, conflicts? You didn't mention this before.

Dr. Alia: I didn't want to escalate it. There were disagreements over some students' assessment criteria, and I felt undermined. My recommendations were often overlooked. And last week, I discovered discrepancies in exam paper security.

Dean Rajan: *Gravely* You suspect misconduct? Why wasn't this reported earlier?

Dr. Alia: I was gathering evidence. But now, with my husband's condition, I can't stay. I've tried to maintain my duties, but the pressure has become unbearable.

Dean Rajan: Dr. Alia, your portfolios involve sensitive information. We can't afford a vacuum in leadership right before examinations. Is there a way to delay this?

Dr. Alia: I wish I could, sir.

Dean Rajan: This leaves us in a critical spot. We'll need to call an emergency faculty meeting to redistribute responsibilities.

Dr. Alia nods, tears welling in her eyes.

Dr. Alia: I'm sorry, Sirir. I never wanted to leave like this.

Dr. Alia: *(standing)* I hope things change here. I genuinely do. This place gave me my career. But it's not the place it was.

She leaves the letter on his desk.
He watches her go.

As soon as Alia left the dean's office, he called his secretary and asked him to call for an emergency meeting. Before he could leave for the meeting, he was visited by Dr. RK Agrawal.

Dr. Agrawal looked happy and informed the dean he was joining another institute as a full Professor and was putting in his papers today. Dr. Agrawal was 52, silver at the temples, with the confidence bearing of someone who had never felt invisible at this institution — until, gradually, he had.

Dean Rajan: Agrawal. I had no idea you were looking for a change.

Dr. Agrawal: When a person spends 20 years at an institution and begins to feel that their opinion is footnoted rather than heard it, they start looking for rooms where they're heard again.

He shakes Dean Rajan's hand with warmth. No bitterness.

Dr. Agraval was followed by Mrs. Venkata Bhatnagar, a young faculty member, who also expressed her desire to submit her resignation. She was twenty-nine. She had been at Harmony for 3 years. She was leaving so that she could complete her PhD and was feeling she was not getting sufficient time to do so while working.

Dean Rajan: We could adjust your course load—

Mrs. Bhatnagar: *(gently)* You said that last year, sir.

He remembers. He had said it. Nothing had changed.

Later that day, an emergency meeting is held. When Dean Rajan reached the meeting, all the faculty had gathered in the boardroom, and there was whispering and disquieting among the members. The entire faculty community looked uncomfortable, worried, and anxious. Some were wondering why so many faculty have resigned, while others were thinking whether they will be retained or be relieved. Faculty was also curious about the reasons for resignation

and how the portfolios of the people leaving will be redistributed.

Dean Rajan, faced with this unprecedented crisis, was left to reflect on the stark reality: three resignations in a day from faculty who had once been the backbone of the university. They had left because of accumulation. Because of the weight of small things, compounding silently over time. Skipped acknowledgments. Unkept promises. The gradual replacement of leadership's empathy with administrative efficiency.The signs had been there—ignored concerns.

The heart of any institution lies in its people.

But people, unlike buildings, cannot be constructed on a timeline. They cannot be budgeted for in a quarterly report. And when they leave, they take with them something that no restructuring plan can retrieve: the irreplaceable knowledge of what made this place, once, worth staying for.

The campus felt heavy with uncertainty. The question lingered**:** *Was it just personal crisis that led to these resignations, or was there something far deeper beneath the surface?*

QUESTIONS

1. What were the real, unstated reasons behind each of the three resignations? How do institutional systems create conditions where people leave for reasons they cannot fully articulate in formal letters?
2. What immediate and structural steps should Dean Rajan take to address the crisis — both the emergency of the present and the culture that created it?

KEY TAKEAWAYS

Importance of Communication: Transparent and open communication between leadership and employees is vital. Ignoring concerns or dismissing feedback can lead to deep-seated resentment and dissatisfaction.

Employee Well-being Matters: Prioritizing the mental and emotional well-being of employees is crucial. Overwork, lack of empathy, and stagnant recognition can lead to burnout and disengagement.

Proactive Conflict Resolution: Addressing conflicts early and creating a safe environment for reporting issues can prevent them from escalating. Ignored or unaddressed conflicts contribute to a toxic work culture.

Value of Recognition and Support: Monetary and non-monetary recognition boosts morale and fosters loyalty. Employees who feel undervalued are more likely to leave, especially when faced with increasing pressures.

Leadership Accountability: Leaders must be empathetic and accountable. A disconnect between leadership and staff can erode trust, unity, and institutional stability.

Continuous Feedback Mechanisms: Establishing formal and informal channels for employee feedback ensures that leadership stays aware of emerging issues. Anonymous feedback mechanisms can help in identifying hidden concerns.

Culture Overgrowth: Institutional growth should not come at the cost of employee satisfaction and cohesiveness. A supportive culture is the foundation of long-term success.

THEORY THAT CAN BE RELATED TO THIS STORY

Theoretical Lens: Servant Leadership: The crisis at Harmony University can be examined through the framework of Servant Leadership (Greenleaf, 1970), a model that inverts the traditional hierarchy of power: the leader exists first and foremost to serve.

The Core Failure at Harmony was not Strategic: *It was relational.* The institutional merger created conditions in which leadership became transactional

rather than transformational, managerial rather than empathetic.

Listening: Servant leaders prioritize genuine hearing over efficient information-processing. Harmony's leadership had channels for feedback but no culture of response. Dr. Alia's documented concerns were functionally invisible.

Empathy: The ability to hold another person's experience as real and significant. Once the merger's expansion demands took precedence, empathy was the first resource to be defunded — though it appeared on no budget line.

Healing: Servant leaders recognize that workplaces hold human beings with histories, fears, and needs beyond productivity. Institutional stress is not managed away; it must be acknowledged and metabolized together.

Building Community: The cohesion that had defined Harmony's culture for 25 years was not accidental — it was cultivated through deliberate practices of inclusion, recognition, and shared purpose. Its erosion was equally deliberate, if less conscious.

When to Use: When morale is low, and trust needs rebuilding during change.

(Moral: The heart of any institution lies in its people).

* * *

Actual Learning is Resilience

Samiksha Bhatt*, Maryam Hanzala Tariq, Asawaree Yadavh*****

Divyanshu sat at his desk, staring at the stack of paperwork that had accumulated over the past week. He always had been a driven individual. He had a natural knack for numbers, which led him to become an App Developer at a prestigious IT firm right out of college. By all accounts, he was on the fast track to success. But, what many didn't know was that Divyanshu's career had not been an easy ride. Behind the polished reports and well-executed presentations was a story of persistence, failure, motivation and unwavering resilience.

It all started during his first major project at the firm. He had been tasked to develop an application analyzing a new market for investment opportunities. One of the most important projects for the company. This project was a cornerstone initiative designed to drive significant and sustainable growth for the firm. The outcomes of this project were expected to solidify the firm's position as a leader in its industry while unlocking new avenues for revenue generation and customer engagement. As a high-priority endeavor, this project demands focused effort, clear communication, and unwavering dedication from all stakeholders. Its success will not only enhance the firm's current operations but also lay the foundation for sustained growth and innovation in the years ahead.

Not just for the company, this project would define Divyanshu's career as well. Divyanshu threw himself into the work under the supervision of Mr. Sameer Malik (mentor). When Divyanshu joined the company, he was brimming with enthusiasm but lacked the practical experience to navigate corporate challenges. Sameer quickly took him under his wing, recognizing the raw potential in the young professional. Sameer Malik was a seasoned professional with over 15 years of experience in market analytics and business strategy. He had built a reputation for being a sharp thinker, a patient listener, and a natural mentor.

Sameer's manager, Mr. Vardaan Kaushik, was a result oriented guy, who did not entertain any diversions from the focus required to complete the project. But when Divyanshu presented his findings to Mr. Vardaan Kaushik the response was devastating. *"Divyanshu, there has to be a clear understanding. This project is very important for the company. You can't just keep asking for suggestions and support, you have to reach a solution."* Vardaan was angry yet again and he was right to be too.

Divyanshu felt the weight of the words sink into him. He had poured months of effort into the project, and now in a single moment, he felt like all of his work had been for nothing. His confidence was shattered. He left the meeting feeling embarrassed, defeated, and unsure of his next step and simultaneously he came to know that his mentor was promoted to another department. After this he felt more disappointed and worried as now there was no one to guide him.

Mr. Vardaan used to blame Divyanshu for any mismatch in project; he made him feel that all the problems and conflicts occurred because of him. Divyanshu asked him many times for guidance, support, required resources and mentor for the effective accomplishment of the project. But, his manager had created pressure on him for completing the project.

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For the next few days, Divyanshu struggled to keep his head above water. The disappointment weighed heavily on him, and the fear of failure gnawed at his confidence. But there was something inside him, a small flicker of resolve that wouldn't let him give up. He thought about his goals, his aspirations, and the opportunities he had worked so hard to earn. He couldn't let this setback define him. So, Divyanshu did what he knew best: he kept going. He reached out to his previous mentor, Sameer, a senior executive, and explained the situation. Sameer listened patiently, then offered him some advice that would change his perspective forever.

"Divyanshu, don't see this as a failure. How can you forget that you are the "Jahapanhaa" of your loved ones? Sameer said with a bright smile to make him realize that he is forgetting something……. Divyanshu's sister Divya, family and friends called him "Jahapanhaa" as he had topped the board exams with an astonishing 98.9% aggregate and simultaneously cleared IIT- JEE. Divyanshu went into flashback, he remembered the day when he called his parents to share the good news with them and their proud voices on the other end of the line brought tears to his eyes. With all the introspection and given his roots, Divyanshu resolved to himself, *"He will be a part of the solution and not the problem."*

With renewed determination, Divyanshu took a step back and reassessed the project. He broke down the data once again, this time with a focus on clarity and actionable insights. He consulted with more colleagues and even reached out to industry experts for their opinions. Slowly, he began to piece together a stronger, more refined strategy.

Two weeks later, Divyanshu presented his developed app. This time, the response was different. His managers nodded in approval, impressed with the depth of insight and the clarity of his recommendations. Divyanshu had turned his earlier failure into an opportunity to learn and grow. His resilience and perseverance had paid off. His resilience became a cornerstone of his professional ethos.

Divyanshu's story became a source of inspiration within the firm. His message was simple but powerful: *"The road to success is not always smooth, but your ability to rise after each setback will define your success."*

QUESTIONS

1. Imagine yourself in Divyanshu's shoes and how would you react to a similar situation?
2. As a fresher, what do you think is the importance of a mentor's role in developing your career.
3. How would you compare the mentorship of Sameer and Vardhan and which according to you did a better job at mentoring?
4. Elaborate the role played by family in instilling values at the workplace.

(Moral: Bounce back Stronger)

* * *

Transformation of Money Magic

Maseerah Naz*, Nitika Asawa,
Tej Prakash***, Raana Pathak******

THE FALL OF A GIANT

In the bustling heart of the fintech world, Money Magic had once been a shining star. Its sleek apps and intuitive platforms had redefined financial management for millions. But over time, the magic had started to fade. Inside the company, the air was heavy. In the break room, employees whispered over coffee:

"Did you see the customer reviews last week?" whispered Priya from customer service. "They're brutal."

"Another team lead quit yesterday," replied Ravi from operations. "I'm telling you; this place is sinking. Management has no clue how bad it is down here."

ENTRY OF THE NEW LEADER

Then, one rainy Monday morning, a buzz rippled through the office. The new CEO, Dr. Raina Kapoor, had arrived.

"Did you hear? She's some kind of turnaround expert," said one employee.

"Yeah, but does she know fintech? We don't need more talk; we need action," muttered another.

In her first all-hands meeting, Dr. Kapoor stepped onto the stage. Her calm yet commanding presence immediately silenced the room.

"I'm not here to sugar-coat things," she began. "Money Magic is in trouble. But let me tell you something: I've faced trouble before, and I've seen what happens when a team comes together with the courage to change. We're going to turn this ship around. And I need every single one of you to be part of it."

A murmur spread through the crowd. For the first time in months, hope flickered.

DISCOVERING THE DEPTH OF THE PROBLEM

Dr. Kapoor spent her first month walking the halls, attending team meetings, and sitting in on customer calls. One day, she joined a meeting between the marketing and tech teams, hoping to observe how the departments collaborated. It wasn't long before tensions boiled over.

"This feature request has been sitting with your team for weeks," snapped Anil, the marketing lead.

"And who's going to handle it? We're buried under tickets, and half my team just quit," retorted Meera, the head of tech.

Dr. Kapoor raised her hand to pause the argument. "Why are we always fighting fires?" she asked calmly. "Where's the roadmap? The shared vision?"

Meera shrugged. "There isn't one. We're just trying to survive."

The realization hit her like a thunderbolt. Money Magic's problems weren't just about outdated systems or external pressures; they were deeply rooted in how the organization worked and communicated.

THE TURNING POINT

One evening, as the CEO reviewed her notes in her office, her assistant knocked. "Dr. Raina, the consultants are here for the strategy session."

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"Perfect," she replied.

In the conference room, she addressed her team and the consultants. "We're using the McKinsey 7S Framework to rebuild this company - strategy, structure, systems, shared values, skills, staff, and style. Everything is on the table. Nothing is sacred. We're starting fresh."

The room fell silent until Ravi from operations spoke up. "What does that mean for us?"

"It means change," Dr. Kapoor said. "It won't be easy. But if we do this right, we won't just save this company. We'll make it stronger than ever."

THE HARD WORK BEGINS

The transformation began in earnest. Raina gathered the department leads for a meeting.

"Strategy is our first pillar," she explained. "We're launching training programs in AI and automation. Priya, I want you to lead that."

"Me?" Priya stammered. "But, I'm just..."

"A natural leader," Raina interrupted with a smile. "I've seen the way you handle your team. You're perfect for this."

Next, Raina tackled the company's structure. She brought in Meera and Anil for a private meeting.

"Enough of the silos," she said firmly. "From now on, your teams will collaborate on every project. No more 'us vs. them.'"

"I don't know if that will work," Meera said sceptically.

"It will," Raina said. "Because I'm holding both of you accountable. You're not just colleagues, you're partners now."

THE CULTURE SHIFT

In a town hall, Raina addressed the employees directly. "I know some of you are tired. I know you've felt unheard. But that changes now. This is your company as much as mine. Your ideas matter, and I want to hear them."

She announced new policies: flexible work-from-home options, a 5-day workweek, and job rotation programs.

The room erupted in applause.

THE RESULTS

Months later, the changes began to bear fruit. In a team meeting, Priya excitedly shared, "The AI tools have cut my team's workload in half. We're actually ahead of schedule for the first time!"

"And customer complaints have dropped by 40%," added Ravi.

Even Meera and Anil had become allies. "This boundaryless thing is working," Meera admitted during a brainstorming session. "I never thought I'd say it, but I actually like working with marketing."

Anil grinned. "Careful, Meera. People might think you're going soft."

THE TRIUMPH

One year later, Money Magic stood tall once again. In her closing remarks at the annual company meeting, Raina reflected on the journey.

"We didn't just fix a company, we rediscovered who we are. Money Magic is about innovation, yes, but it's also about people: our customers and each other. Together, we turned challenges into opportunities. And we're just getting started."

The employees rose to their feet, cheering. For the first time in years, the magic was back.

QUESTIONS

1. **Leadership and Vision**
   - What qualities of Dr. Raina's leadership do you think were most critical in turning around Money Magic?
   - How can leaders balance empathy for employees with the need for rapid organizational change?

2. **Strategic Interventions**
   - Why was it essential for Dr. Raina to address both structural and cultural issues?
   - What role did the McKinsey 7S Framework play in identifying and solving the company's problems?
3. **Employee Engagement**
   - How did Dr. Raina's focus on work-life balance and job rotation impact employee morale?
   - Why is it important to include employees in the transformation journey?
4. **Innovation and Adaptation**
   - What lessons can organizations learn from Money Magic's adoption of AI and automation?
   - How can companies foster a culture of innovation in a rapidly evolving industry like fintech?
5. **Crisis Management and Change**
   - What could Money Magic have done earlier to avoid the decline in its operations and reputation?
   - How does this story highlight the importance of embracing change rather than fearing it?
6. **Customer Focus**
   - How did Dr. Raina rebuild trust with customers, and why is this critical for long-term success?
   - What role did improving customer experiences play in Money Magic's transformation?
7. **Personal Reflection**
   - If you were part of Money Magic's team during this transformation, how would you have contributed?
   - What lessons from this story can you apply in your own organization or career?

These questions can spark deep discussion and help participants draw meaningful insights from the story.

MORAL OF THE STORY

The transformation of Money Magic teaches us that *true leadership lies in recognizing challenges as opportunities for growth* and addressing them with courage, empathy, and a clear vision. Success isn't just about fixing processes or adopting the latest technology; it's about fostering collaboration, valuing people, and creating a culture that embraces change. Organizations thrive when they balance *strategy, systems, and structure* with a focus on *shared values, leadership, and skills.* When leaders invest in their people, build trust, and inspire collective ownership of the mission, they not only solve problems but also create a foundation for lasting success.

(Change isn't something to fear, it's an invitation to reinvent and thrive).

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From Streams to Scarcity: Rishi's Journey of Realization

Archana Nag*, Rachana Jain, V. Gayathri*****

Rishi, a young IT professional, settled in a city for his job working in a multinational company. Over time, his family joined him, selling their home and the land they had owned for generations. The village they had once called home became a memory, slowly fading into the background of their urban life. Yet, the city wasn't what Rishi had imagined. Though he saw development in the name of infrastructure and better standard of living amongst city dwellers, he could find heavy crowds, traffic, pollution, lack of sanitation, poverty and inequality at the same time.

In his initial days, Rishi struggled hard to adjust to city life. He fell ill and was diagnosed with typhoid, the doctor asked him to take care of his eating habits with stress on drinking clean water. He was advised to go for boiled water or bottled water. He was surprised to find that water was being sold as a commodity. He spent a significant portion of his income on water—filters, dispensers, and bottles. Every drop he consumed reminded him of the days when the river behind his house flowed freely, when water was a gift of nature, not a commodity to be bought.

Rishi's mind goes back to his good old memories of nearly 15 years ago. His school days and childhood days, when he was very happy with his parents, siblings and his fellow mates. He lived in a place which was away from this urban area. He went to school on foot, though he walked for a long time he never felt tired as he used to chat with his friends Diya, Ramya, Dinesh and John.

Ramya: Guys! I didn't do homework yesterday.

Rishi: Why Ramya?

Ramya: I went movie yesterday.

Dinesh: I too didn't finish. I went to aunt's home in the city.

Rishi: Really! I too love to go there once. But, my mom and dad are not allowing me. For next vacation I'll go to my cousins' home.

Most of the parents' occupation was farming. The children used to climb trees, run into the paddy fields, play on the straw heaps and got beaten by the owners. Their locality was filled with greenery, and they had not heard about water scarcity. At the backyard of his house, there was a river, which never got dried up. Rishi and his younger sister Meghna used to play and swim there during their holidays. Every year for summer vacation, Rishi's cousins Gokul, Hema and Shiva used to come and stay with them for a month, and they enjoyed each other's company.

Days went on. Rishi got promoted from secondary school to higher secondary school. As the cousins too were in higher secondary level, they were not able to come for vacation. They had their extra coaching classes to concentrate. In Rishi's village there were no such classes. So that year, Rishi and Meghna went to their cousin's home which was in a metropolitan city. On seeing the entertainment and attractions in the city Rishi longed to live there and didn't want to go to his village. When they went for outing, his uncle bought water bottles from the shop for drinking and Rishi considered that to be a symbol of status without knowing the future consequences at that time.

Rishi: Meghana, see how uncle buys distilled water.

Meghna: So what?

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Rishi: you don't understand. Hmm!.. there our mom gets tap water and stores it in a pot.

Meghna: Don't be silly Rishi.

Rishi: See! One day I would also buy water like this when I live in this city.

Meghna (blinked as she didn't understand what Rishi was saying)

After vacation he needed to go and continue his studies. With regret he continued his studies and somehow finished his 12th grade. He wanted to continue his higher studies in the city even though he got admission to Computer Science group in a reputed college, near his village. He was adamant to join the city college though he was aware of their financial situation and knew that his parents had to spend a lot of money. He fought with his parents to join the city college where he had to stay in the college hostel.

Rishi's mom: My dear! You know our financial condition now. You have got a seat in a good college here.

Rishi: Mom, my long-time dream is to be in the city. Don't spoil that.

Rishi's dad: We need to spend lot of money if you go to city.

Rishi: I'll earn lot of money in my future dad. Don't say no.

Rishi's parents decided to send him to city with their burden as he was not ready to listen to their words.

There started his problem on the first day. He had to make use of the hand pump to fetch water for his use. He poured plenty of water into the washroom and when he asked for an extra bucket of water, it was denied and the warden scolded him for wasting water in the wash area.

Warden: What the hell you are doing? Do you know the value of water?

Rishi: I didn't do anything wrong. I need one more bucket of water please sir.

Warden: one more? Per day one bucket per person is allowed. Make use of it properly.

Rishi: Oh my God!

With the limited resource of water, one bucket per day, he needed to survive. The problem didn't stop with this alone. When he drank a sip of water, he could feel it was too salty, which he never had that in his life. During his school days, his mom compelled him to drink plenty of water and packed two to three bottles with fresh water. He felt that as a burden and he used to spill it on the way before going to school. One of his friends used to comment.

"Rishi, one day you would not have a drop of water to drink". Be mindful! Rishi.

Rishi (mocking): I'll survive without this water. You mind your business".

Rishi thought about his village during his stay in the hostel. "How wonderful those days were"! I miss my golden days.

During vacation, he had very short time to go there and stay.

Rishi was woken up by a sudden sound which was coming from downstairs and could hear lots of noises with people fighting over municipality tanker which had come their colony after three days of non-supply of water. Water scarcity had become the order of the day. Rishi had the resources to buy water while most of the people in the surrounding areas could not afford it and were dependent on the government supply. Though he regularly saw people fighting over water but today was different. Rishi was very upset. Maybe he was remembering his good old days and analyzing the present situation. Words of his friend were echoing sharply in his mind. He really wanted to do something. But how?

He got busy with his routine but the idea of doing something clung to him. This morning Rishi's colleague Vijay invited him to his sister's marriage to be held at The Oberoi Hotel and Resorts, nearly 50 kms away from his place. Rishi got ready for the marriage function which was extended to 2 days of

rituals and fun filled activities. The whole invitees boarded the private bus which took them to the resort. It was the first time Rishi had attended such a lavish function. His friend's sister was getting married in a wealthy business family and Rishi was amazed at the grandeur of the function. On that day, he noticed extravagance to the highest level. One more thing which was relatable to him was wastage of water, people leaving unfinished water bottles in waste bins. He was introspecting, had this water been collected in a water tank, this would have sufficed many people's daily needs, people who were fighting over water, earlier.

When Rishi returned from the function, he was totally transformed. His wish to help deprived people with providing safe drinking water at nominal rates, was taking shape. He thought of starting up a packaged drinking water brand and positioning it as an exclusive one for the rich and wealthy people. He researched and found that the economic concept of Diamond-Water Paradox, already exists. His conviction got stronger as he studied more. For the start, he contacted various event planners of his city to find out an average consumption of water bottles along with other data.

He was sure that he will make water a luxury brand but how to do that was a major challenge. He knew the path ahead was not going to be easy and he was ready for it. He learnt about various process stages like sourcing and filtering of water, packaging and branding, etc. He didn't want the brand to be only a luxury brand but it had to suffice the environmental and social obligations too. He wanted to help the community at large.

Rishi thought in an urban scenario, pure and pristine water is a luxury. He told his friend Vijay and Anil.

Rishi: I will make this water label as an international brand.

Vijay: But how and what means it is possible Rishi?

Rishi: For this, I should go back to my village where lots of land waiting for investment opportunity.

Vijay: From city to village again? Are you mad?

Rishi: This would generate employment in the village and utilize the talent of local artisans in creating reusable, recyclable containers each crafted with a story and customized as per requirement.

Anil: Hey! It seems to be a good idea.

Rishi expressed that he had multiple ideas about these containers made out of glass or other recyclable material which could be used as return gifts as well.

Anil: This thought is innovative.

Rishi: The product has a huge market and could be sold at a premium price. Moreover, major chunk of the profits could be utilized to provide clean water to the masses at affordable rates.

After listening to his idea Vijay and Anil, got overwhelmed with the concept and were ready to help him in his venture as far as possible.

Anil: Rishi the concept is really good.

Vijay: I too think this will work out. But, we need to analyze the practical difficulties and proceed further.

Rishi: Vijay! If you support for this good cause, we'll be able to achieve.

Anil: Ah! Yes Vijay. You have good contacts and investors. Can you arrange for a meeting with them?

Vijay: Of course.

Vijay had good contacts with some investors and arranged for a meeting. Rishi, Vijay and Anil pitched their concept with full conviction. They believed that if rich and wealthy people could buy luxury items like gemstones, perfumes, watches or cars to name a few, they will happily purchase a premium packaged and customized water container with health benefits which would also be environment friendly and become an epitome of socially responsible product. One of the investors was already associated with an NGO, so he got interested in serving the Bottom-of-Pyramid markets and makes a win-win equation with rich and elite.

Rishi and his team left their jobs and started focusing on their dream. Rishi's parents who had seen many difficult times and had struggled hard to settle Rishi in

the city, were shocked at this decision. It took a while to convince his parents who were a little skeptical about him going back to the village. Rishi told them that he is having his support system in form of Anil and Vijay and can always move back to city in case his venture doesn't work out.

Rishi's Dad: Why have you taken a sudden decision Rishi?

Rishi: Dad, don't worry. I have a good support system. My friends Vijay and Anil will be supporting me.

Rishi's Mom: My dear, I can't understand. You were the one who dreamed to live in city. Now you wish to move to our village back!

Rishi: Ma, Now I realized the worth of our native. I missed the treasure. Now time has come to serve the society as well to make some money for us. Don't' worry. I'll be successful.

With a decent share of challenges, perseverance paid off. The water company "RAVi" was inaugurated by village sarpanch in presence of investors, villagers and all the concerned persons, on the auspicious day of Baisakhi. In his plans, Rishi ideated to tie up with Ministry of Water and other government departments who had initiatives like Namami Gange and Clean rivers.

Slowly, RAVi found its clientele in top industrialists of the country and went global. Meanwhile another department of the company was dedicated to produce clean water for the economically backward and bottom-of-pyramid masses. Rishi is happy now, well settled in his life in his own village in pure air and clean water. He followed his calling, worked toward it and happily contributed toward a sustainable and ecofriendly society. He doesn't find people fighting over water, any more.

QUESTIONS

1. Illustrate how the challenges faced in urban life influenced Rishi's entrepreneurial decision-making process.
2. Apply the concept of the Diamond–Water Paradox to explain how Rishi transformed an ordinary resource into a premium luxury product through RAVi.
3. Demonstrate how setting up a factory in a village can contribute to local economic development and employment generation.
4. Analyze the push and pull factors that influenced Rishi's migration from the village to the city and his eventual return to the village.
5. Examine the social and economic impact of the factory on the village community and assess how rural entrepreneurship can reduce urban migration.

(Moral: Being happy in one's own space is the true parameter of success. This feeling of fulfillment comes when one goes beyond personal gratification and contributes to the society by providing solutions to uplift communities and care for environment at the same time. Providing dignified opportunities to the needy and making essential facilities accessible and affordable to them can really make the difference and make this planet a better place to live).

* * *

Breaking the Conflict Spiral

Aditi Veda*, Upinder Dhar, Ashwini Mehta*****

Bright Minds Academy was recognized as a school with excellent academic performance and productive teachers. One of the most loyal employees was Meera. She was an outstanding teacher of mathematics, producing excellent results constantly. However, there was more to Meera than the professional outlook she had, she was a single mother struggling to bring up her 6-year old daughter after a bitter divorce.

Over the time, Meera's personal life issues started reflecting on the job forcing the firm to look for another employee. She often submitted the work late, seemed to daydream in meetings, and get agitated easily with fellow employees as well as students. It frustrated other staff members including Rajiv, the head of academics who was a disciplined person. Rajiv believed who thought efficiency was of paramount importance. Stress between the two escalated leading to waves of inconvenience affecting all the teachers.

The turning point was one day in a monthly staff meeting. Becoming impatient with Meera because she almost every time failed to submit the lesson plans on time, Rajiv insulted her.

"Your delays are affecting the entire curriculum schedule," he said sternly, in front of the team.

Meera, already emotionally drained, snapped back:

"Maybe if I weren't overloaded with pointless tasks, I'd have time to focus on my lessons!"

The exchange left the room tense. Employees were not sure how to intervene. For Meera, the public reprimand felt humiliating. To Rajiv, her response was felt to be discourteous. These were the seeds of conflict which had begun.

After that, the situation only deteriorated in the subsequent weeks. Rajiv started changing direction and nitpicking on what Meera was doing, Meera, on the other hand, stopped responding to him. Other members of the faculty joined in, lining themselves up on either side of the issues. Productivity and morale plummeted.

Realizing the situation was unsustainable, Dr. Rashmi Sharma, the principal, decided to intervene. Both Meera and Rajiv were called into her office for a one-to-one discussion. Dr. Sharma began the conversation by expressing concern and setting a constructive tone:

"I've noticed some tension between you two, and I believe it's affecting the team. Let's talk about what's happening and find a solution."

Both Meera and Rajiv were given the opportunity to share their perspectives:

- Meera was able to disclose the exact state of her circumstances in detail that moved her to tears. She said her divorce proved to be stressful in terms of emotions and finances, bringing her to the point of overwhelm and thus unable to deliver work as expected.
- Rajiv: He said that he expected Meera to deliver the work on time but did not know that his frustration had stemmed from her personal problems.

Dr. Sharma reframed the issue as a shared challenge rather than a blame game:

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It is not a question of right or wrong here. "It's about making sure that we can be good team members for one another; that we can respect each other during good times as well as during the bad."

Dr. Sharma proposed a solution:

1. Meera's case would be to bring down her workload for some time so as to help her teach and also do some personal healing.
2. Rajiv would replace public criticism with private, constructive feedback.
3. The faculty would also use a peer counseling system to help any staff with personal problems.

The next few weeks were more relaxed with less ill feelings between both of them. This is evidence that after Rajiv has understood what was going through the mind of Meera he decided to change his leadership approach. Some pressure was off her now and she came back to life, along with her performance, feeling more confident. The department that was on the edge to split into two and was not effectively communicating prior to the events described in the text, got back to functioning as one.

The conflict between Meera and Rajiv was an example of a conflict spiral that is a process characterized by unconstructive, advocated responses to conflict. With timely involvement, understanding management, and general communication, the toxic cycle was disrupted and instead was turned into a positive pattern.

In addition to solving the problem at hand, Dr. Sharma's strategy relieved tension throughout the faculty as employees adapted to a new way of thinking and behaving. Meera and Rajiv's improved relationship became a testament to the power of understanding and constructive conflict management.

QUESTIONS

1. How could Rajiv have approached the initial issue with Meera differently to avoid escalating the conflict?
2. What role does empathy play in resolving workplace conflicts, and how can leaders foster it within their teams?
3. If you were in Dr. Sharma's position, what additional strategies might you use to prevent similar conflicts in the future?

(Moral: Workplace conflicts often arise from misunderstandings and unrecognized personal challenges. Empathy, respectful communication, and timely intervention can transform conflict into collaboration and strengthen team relationships).

* * *

Tea Time Cravings

Manish Sidhpuria*, Anushka Pandey,
Pooja Verma***, Heema Dhamecha******

Kamal - a young management graduate from a premier institute - is associated as a sales head with a reputed pharmaceutical company located in the mega city of India. He has moved to this city for the job and stays in a small 1-BHK apartment well suited to a bachelor. Normally his day starts at 6 O'clock with a brisk morning walk. He used to maintain this daily schedule despite late night calls and online meetings with international clients. Then complete a regular workout schedule at home and then to the office after a healthy breakfast.

One day while driving toward his office he was in a rush as he was frazzled because of an important meeting with an international client. He hurriedly checked his iPhone and left for his office.

After reaching office, he became busy with the routine of calling clients, office meetings and other paperwork. In the afternoon, he received a call from a very important international client. No sooner did he finish the call, he exclaimed with joy - *we got it* - and shared this news with his boss, other colleagues.

His boss praised him "Wonderful job! You did it. We closed the deal of the year. Let's call for celebration."

Kamal replied, "Sure Sir, this weekend."

He felt overjoyed after returning to his chamber. It was really great news. He just looked at the clock. It was 2:10 pm. He thought the office tea would be served at 3:00 pm. He spoke to himself, "I want to have some snacks, but what would I get? From where should I order? Where would I get healthy options?" He murmured, "Let me Google it." While searching for the options, he was determined to avoid junk food loaded with calories. "Why search on Google? Let me go to the food delivery services." He quickly opened food ordering apps on his iPhone and started searching for a good option. He wanted something healthy to be delivered in 15-20 minutes. He looked at various options available with blinkit as well as Swiggy Insta.

He came across a nice photo of nut cracker peanuts of a good brand that promised to be healthy. But we saw the details. He found that palm oil was used, it was full of saturated fats, high calories and low levels of proteins. He turned to other options. He noticed low calorie high - protein greek yogurt. Good option but not suitable to quench the tea time craving. The same brand was also offering a high protein milkshake with various flavors and zero sugar variants, but that would not be suitable at afternoon tea time.

He also looked at low calorie and high fiber nutrichoice biscuits but he wanted to have something savory rather than sweet. He went on to look for another option. He thought fox nuts would be fine. While going through the nutrition chart on the package, he observed that though it is a good source of protein with low calorie, the carb was slightly high. He also looked at ragi chips, corn chips, baked chips and other such options.

He found chips made up of oatmeal that contained high fiber, baked, low calories, gluten free, and also a good source of protein. He thought it to be a good option to go for tea time. He ordered it and made the payment. He looked at the clock. It was 2:45 pm. He

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once again opened the screen and started looking at the nutritional information about the product that he just ordered. He felt satisfied that the choice seemed to be right.

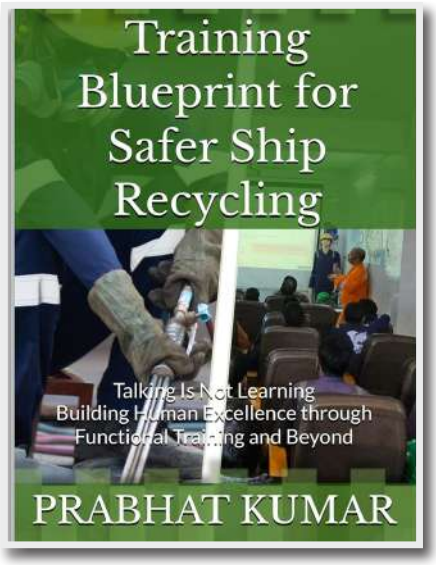
QUESTIONS

1. Describe the profile of Kamal.
2. Do you think his search process was in the right direction?
3. What criteria of evaluation of options were adopted by Kamal?
4. Was this situation a high involvement or low involvement?
5. Discuss the concept of evoked set, in-apt set & inert set.
6. What do you think about his post purchase response?

(Moral: A consumer should have a clarity of mind and thoughts in order to make the right choice).

* * *

Training Blueprint for Safer Ship Recycling: From Risk to Readiness - Talking is not Learning: Building Human Excellence through Functional Training and Beyond



***Author*: Prabhat Kumar**
***Year of Publication*: 2025**
ISBN: 978-93-5635-270-4

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Reviewed by:* Shekhar Suman

Training Blueprint for Safer Ship Recycling is a timely and practice-rooted contribution to the field of Learning and Development. Although situated in the ship recycling industry, the book speaks to a much wider audience of trainers, safety professionals, supervisors, and organizational leaders working in high-risk, labor -intensive sectors. Its central proposition is both simple and important: training is not the mere transfer of information, but a structured system for building competence, changing behavior, and sustaining safer performance at work. This orientation places the book firmly within the domain of applied Learning and Development.

One of the strengths of the book is its reflective, field-based starting point. Rather than treating training as a compliance ritual or a classroom-only activity, the author examines how his own understanding evolved from 'talking' to 'teaching'. He candidly reflects on an early realization that workers often responded positively to training sessions, yet many could not fully connect with text-heavy content or transfer classroom learning to the field. This reflective framing gives the book authenticity and helps distinguish it from generic safety manuals. The book emerges not from abstraction alone, but from the author's attempt to solve real instructional failures in a demanding industrial context.

A particularly valuable contribution of the book lies in how it addresses the training needs of workers with low literacy. This is not treated as a side issue, but as a foundational design challenge in workplace learning. The book recognizes that ship recycling workers often come from different linguistic, educational, and social backgrounds, and that some may not know how to read and write at all. It argues that this reality should shape the design of training materials, work permits, signage, and standard operating procedures, and that worker profiling should be used for inclusion rather than exclusion.

The solutions proposed are practical, thoughtful, and immediately usable. The author recommends adapting training methods through audio, video,

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images, and demonstrations. He questions over-reliance on text-heavy slides and advocates training designs that consider literacy, experience, and learner comfort. One especially useful principle is the suggested 80–20 emphasis in presentation design: roughly 80% images or videos and 20% text, so that workers with low literacy can still engage meaningfully with the material.

The same concern for learning access continues into assessment and reinforcement. The book challenges the assumption that workers who cannot read or write cannot be effectively trained or assessed. It presents alternatives such as pictures, diagrams, actual yard photographs, videos, case studies, and physical activities, thereby reducing dependence on written assessment alone. It also proposes the colored-placard method, which enables group-based evaluation of workers, including those who cannot read or write, through quick yes-or-no responses.

In reinforcement, the author recommends pictorial posters, pocket reminders, icons, and visual job aids that remove the barrier of reading difficulty while supporting memory and workplace transfer. These sections are especially relevant for Learning and Development professionals concerned with inclusive learning design, workplace assessment, and transfer of training.

Structurally, the book is organized around a five-phase training cycle: understanding learners and the work, planning and creating training materials, delivering training that works, measuring effectiveness, and reinforcing learning. This gives the book a clear developmental logic and makes it more than a collection of field observations. It becomes a training framework. The cycle is presented as a repeatable system rather than a one-off intervention, and the book repeatedly emphasizes that training should be systematic, traceable, and continuously improved. This systems orientation is one of its strongest contributions to Learning and Development practice.

Another notable strength is the book's insistence that training must connect with risk, business objectives, and workplace behavior. It critiques earlier approaches in which training became record-driven, generic, or disconnected from hazard identification and risk assessment. In response, it advocates role-

based training matrices, measurable objectives, scenario-based content, post-training effectiveness checks, supervisor involvement, and continuous reinforcement through toolbox talks and micro-learning. In doing so, the book positions training not as an isolated function, but as part of operational excellence, safety culture, and organizational performance.

The foreword rightly suggests that the book's relevance extends beyond ship recycling to other high-risk and labor -intensive industries. That claim is persuasive. While the examples are drawn from ship recycling yards, the broader training concerns—learner diversity, literacy barriers, role-specific competence, behavior change, supervisory reinforcement, and transfer of learning—are shared by many sectors, including construction, manufacturing, logistics, mining, and process industries. The book is therefore both context-specific and transferable.

Overall, Training Blueprint for Safer Ship Recycling is best read as an applied Learning and Development book with a safety-critical context. Its chief value lies in translating training theory into a structured, experience-tested framework for difficult workplaces. Its reflective tone, practical examples, and inclusive treatment of low-literacy workers make it especially useful for practitioners who want training to move beyond attendance sheets and presentations toward actual competence and behavior change.

For readers of the Indian Journal of Training and Development, the book offers not only a sectoral case, but also a broader reminder that effective learning design must begin with the learner's reality. When that reality includes multilingual, low-literacy, high-risk workforces, this book provides meaningful and actionable guidance.

* * *

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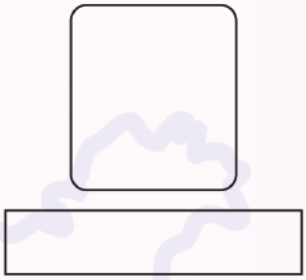

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Volume 56, No. 2
April-June, 2026

Indian Journal of Training & Development

Reg. No.: DELENG/2001/3484
ISSN 0971-5592

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Published by

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