

A Statistical Analysis of Employee Attitudes Toward Orientation Programs in the Technology Industry

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Abstract: Orientation is the way of putting newly hired registered members of an organisation in a position where they are productive individuals on day one. Given that it will occur within the correct timeframe, the process should be controlled, defined, and executed as part of organisational training calendars. Orientation is the initial step of any activity of human resource management. It is the acclimatisation process of the new employees to the organisational work culture and fellow workers. The study presented in this paper aims to monitor the attitude of employees towards the orientation program undertaken in the Technologies. This research helps in determining the relationship between orientation input and employee opinion, as well as employee output. Through this research, feedback has been obtained through a questionnaire. The research sample of 100 employees has been kept in view while considering this research. Simple percentage analysis, one-way ANOVA, and correlation analysis are being used for the statistical analysis of this research. We recommend that employee orientation be for longer than a day, preferably 2-5 days. Newcomer orientation is to start with the welcome by HR of the said department, whose duty it is to show the newcomer around the department in an attempt to introduce him to the other employees. Depending on the other results, sufficient recommendations have been made to the management.

Keywords: Orientation Process; Simple Percentage Analysis; Orientation Scheme; Traditional Handshake; Unacceptable Wastage; Organisational Behaviour; Human Resources; Hiring and Training.

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1. Introduction

Orientation is an essential ingredient in ensuring optimal return on investment in the hiring and training of new employees. Because hiring and training are heavy financial and Time investments, firms need to get new members onto their teams correctly to limit turnover and avoid forfeiting these investments, as found in prior studies [1]. The first contact a new employee has with their company tends to be lasting; hence, the new experience must be framed, educative, and supportive, an experience widely

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known among organisational studies [10]. An effective orientation program provides a crucial foundation for newcomers, enabling them to understand their employment terms, the workplace, and their place within the organisational structure, as highlighted in recent publications [5]. It acquaints them with others and management alike, which brings comfort on an initial nervous basis and aids feelings of belonging, as presented by best practice human resources readings [4]. Yet, numerous organisations do not have a standardised orientation program and rely on unorganised methods of induction, like learning from trial and error or symbolic induction with handshakes, where recruits do not receive necessary exposure to work [8]. The lack of clear induction makes these employees feel alienated, creating disengagement as depicted across several case studies [8]. These strategies cause detachment and render early resignation highly probable, negatively affecting productivity and morale as captured in in-depth reviews of organisational behaviour [8].

Effective orientation reduces these risks by making new employees feel secure and well-equipped with tools and information to perform effectively, a practice often employed in high-performing organisations [7]. Orientation is a process of formally introducing recruits to key elements of the organisation. This encompasses organisational history, size, and structure; rules and procedures governing employment terms, discipline, safety, and office operations; and job-specific information such as roles, responsibilities, training requirements, and departmental workflows, as per studies on effective onboarding [3]. In addition, recruits require personal information like payroll procedures, restrooms, cafeterias, and informal team norms, which are crucial in minimizing stress and enhancing comfort, as noted in employee well-being studies [9].

Understanding how to get access to resources or the social dynamics of the group, such as informal lunch meetings, can have a more direct effect on integration than procedural policies, as noted in employee engagement studies [10]. Placing the right people to disseminate this information is also critical, as revealed in organisational communication models [11]. Although initial formal briefings and documentation could be assigned to the human resource department, the immediate supervisor must still be the main person overseeing the orientation process, a support provided by research in leadership [12]. This not only guarantees accuracy and consistency in communicating work-related expectations but also enables the establishment of an effective working relationship from day one, as shown in leadership best practices [13].

An informal view can be gained from a peer or in-the-workplace trainer, who will assist the new entrant to settle into the culture of the department, and representatives like shop stewards, who will outline communication pathways and staff assistance networks, based on team dynamics and organisational culture studies [14]. A short initial meeting with a higher manager also helps the employee more clearly see the contribution of their job towards larger objectives and the significance of their position, as discussed in strategic management literature [1]. Orientation can start even before the actual onset of employment, with pre-hire instructions about reporting Time, place, point of contact, documents to bring along, and logistics such as parking, as advised in onboarding research [2]. Employers must also have the recruit's workstation, safety equipment, or other supplies prepared for arrival, as highlighted in best practices for successful onboarding [3].

The Initial day is pivotal in creating Impressions. It should be structured to address necessary paperwork, employee manuals, colleague introductions, and a brief overview of job responsibilities, without overwhelming with information, as noted in studies on employee retention [4]. Once the employee is on board in their department, the emphasis is on role-specific guidance and expectations, a strategy evidenced in work on job satisfaction and performance management [5]. Departmental orientation, typically conducted by the immediate supervisor, should establish performance standards and daily tasks while leaving room for open questions, as evidenced in management training literature [6]. After a week or two, follow-up is to learn of any unfinished issues and open more avenues regarding opportunities like training or career enhancement, a strategy defined in literature on employee development [7].

It also presents an opportunity for deepening the recruit's acquaintance with the firm's structure, values, and long-term visions, as discussed in organisational learning models [14]. Special cases such as fresh graduates or college leavers need more delicate treatment, as noted in studies on the pitfalls of onboarding young professionals [9]. These are people, usually entering their first job, who might be apprehensive and uncertain about office expectations, a situation frequently dealt with in studies on workplace integration for new graduates [10]. A customised orientation that reminds them of their importance to the organisation, describes how their job contributes to greater goals, and familiarises them with the unwritten rules of workplace conduct aids in cultivating their passion, as shown in research on mentorship and career growth [11].

2. Literature Review

Organisations spend a lot on their employees in terms of orientation, training, development, and retention. Though there is no single framework to comprehend employee satisfaction and training requirements, numerous factors have been identified as being determinative in explaining the efficacy of orientation programs, as indicated in workforce optimisation research [1]. Workforce optimisation is key to employee retention through the facilitation of major processes that are required in the

accomplishment of tasks, with good working conditions, establishment of accountability, and strategic recruitment decisions, a practice that is commonly cited in human resources literature [2].

In optimising these factors, organisations can cultivate employee retention as well as facilitate a productive work environment, as observed in some research on employee engagement [3]. Here, satisfaction is a positive affective response to work experiences, reflecting the quality of training and orientation interventions, as Job satisfaction and retention research underscores [4]. Satisfied employees are likely to remain in organisations for extended periods, as cited in research studies on employee retention initiatives [5]. Critical assessment of new hire orientation programs reveals diverse perspectives on their utility and implementation strategies.

Effective programs will involve mentorship, whereby experienced employees lead new entrants into the organisational culture, as emphasised in studies of workplace mentorship [6]. Orientation must extend beyond mentorship and involve sustained support systems from the organisation, as suggested in studies of comprehensive onboarding processes [7]. Longitudinal programs embed comprehensive evaluation procedures that enable managers to monitor and direct the training of new staff, a practice often followed by firms with systematised orientation programs [8]. Systemised and long-running orientation systems that last from two to five years produce better results through ensuring staff acquire skills that facilitate professional growth and promotion, as evidenced in studies on longer employee integration [9].

Employees have a pressing need for information and play a crucial role in decision-making. Whenever employees are engaged in decision-making, they feel they are of greater value to the organisation. They would stay with the company for a longer period, a fact examined under employee empowerment research [10]. Effective orientation programs encourage more awareness of organisational culture and climate, enabling workers to match their behaviour with the values and mission of the firm, as postulated in organisational behaviour studies [11]. This sense of belonging and awareness translates into job satisfaction and reduced turnover, a result which has been consistently discovered in organisational commitment studies [12]. Organisational commitment is also another significant factor in retaining employees.

It is an indicator of how attached and committed employees are to their organisation. Employees who are highly job-involved are more involved in their work and closely identify with their job, according to job involvement and retention studies [13]. Commitment of this nature can be enhanced through job enrichment, significant responsibilities, and continuous training and development, according to employee development programs studies [14]. While training and delegating to employees by management leads to increased job satisfaction and organisational commitment, as identified in leadership research [1]. Employees who feel empowered, where more decision-making power is assigned to them, view their leaders as competent and fair and tend to perform up to expectations and remain with the organisation, as hypothesised in empowerment research [2].

Empowerment also involves creating flatter hierarchies, allowing managers to work with more employees and delegate tasks effectively. This approach instils a sense of ownership and accountability, resulting in greater employee satisfaction and reduced turnover, as cited in management literature on leadership and empowerment [3]. Employees who feel trusted and empowered are more committed and engaged, resulting in a longer-term attachment to the organisation, as cited in studies on employee engagement and organisational culture [4]. Open information-sharing across all management levels also improves employee performance and facilitates a robust corporate culture. When employees are given information that is pertinent to them, they feel included in the decision-making process of the organisation, which creates trust and alignment with organisational goals, a finding emphasised in organisational transparency research [5].

Such openness facilitates collaboration and overall productivity, as seen in communication strategy research in high-performance organisations [6]. Job design is also an important determinant of employee job satisfaction and retention. Skill variety, task identity, task significance, job autonomy, and job feedback are among the factors contributing to job enrichment, as noted in the literature on job design and employee motivation [7]. Skill variety allows employees to apply different skills and abilities, leading to increased job satisfaction. Task identity is accomplishing complete tasks with visible results, giving workers a sense of fulfilment. Task significance is the impact of what one does on others, ensuring the task is more meaningful, as shown in job enrichment studies [8]. Job autonomy gives workers freedom and latitude in scheduling and decision-making, ensuring independence and accountability, a key consideration in organisational design research [9]. Finally, job feedback provides employees with true information about their performance so that they know how effective they are and how to improve, as noted in feedback and performance management studies [10]. Jobs are structured by organisations with these fundamental components in mind when creating engaging and fulfilling work environments that lead to employee satisfaction, motivation, and retention, as seen in employee engagement studies [11].

By providing meaningful work, autonomy, and career advancement opportunities, organisations create a committed and high-performing workforce, as organisational commitment and workforce development studies indicate [12]. Furthermore, fostering a culture of continuous learning and career advancement keeps employees motivated and aligned with the company's objectives, as career development studies indicate [13]. Overall, employee retention is influenced by a combination of effective orientation programs, communication, job enrichment, and empowerment efforts. By investing in these, organisations can establish a loyal,

contented, and high-performing workforce, thereby achieving long-term success and sustainability, as hypothesised in sustainable workforce management research [14].

3. Methodology of the Study

The technology orientation process is also key to developing the experience of the new employees and how well they are integrated into the company. The main purpose of the research is to examine the extent to which the orientation program facilitates the adjustment of new employees to the work environment, policy, and standards of the company. It is a process of examining the employee attitudes towards the orientation process, quantifying the orientation inputs to worker performance linkage, and suggesting how it can be enhanced. Orientation is a most vital stage of human resource management, employed to acclimatise new employees to the working environment of an organisation, organisational policies, and organisational culture. It is a process of socialisation of an organisational nature that develops people to be efficient devices towards organisational accomplishment. It involves new entrants acquiring policies and legislation, alongside company employees, who then become adapted into the firm's culture. The final orientation program is designed to enhance the confidence of workers by visualising the company's vision, mission, and core beliefs.

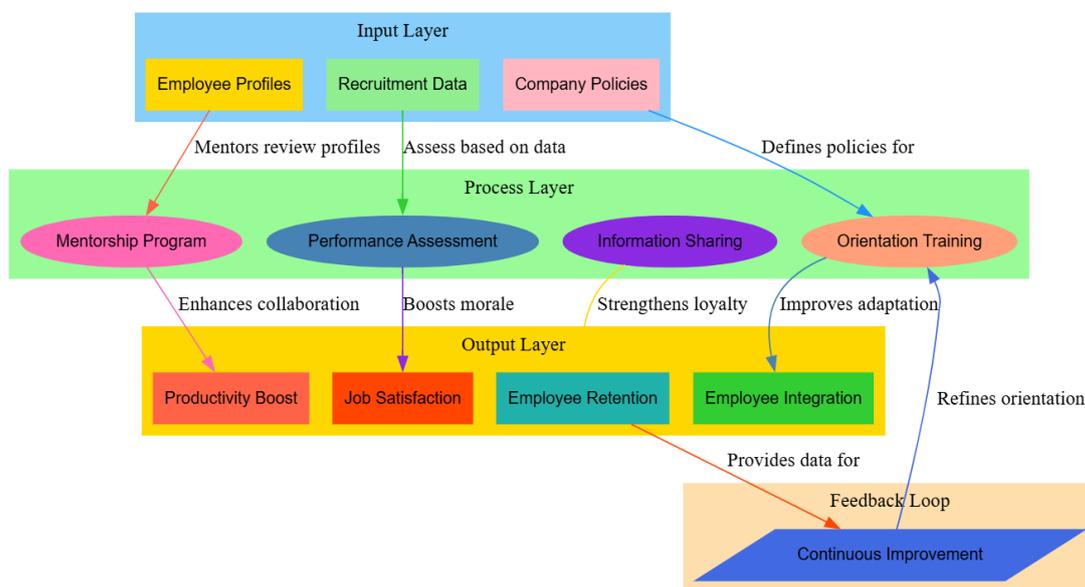


Figure 1: Effectiveness of orientation process technologies

Figure 1 depicts the Deployment Architecture of Effectiveness of Orientation Process Technologies, where increasingly deeper layers are pointing to alignment: Input, Process, Output, and Feedback. The Input Layer has mandatory sources of information, including company policy, employee profiles, and recruitment material. Inputs are those orientation process elements by abstracting organisational rules, providing employee information, and setting performance expectations. The fundamental orientation activities, such as training sessions, mentoring sessions, performance appraisals, and communication channels, constitute the Process Layer. The processes facilitate the new employees' orientation to the firm, training, and the development of teamwork. Output of the orientation process, like employee assimilation, productivity, job satisfaction, and employee turnover, constitutes the Output Layer. Successful orientation of the employees results in rapid adjustment, enhanced performance, and organisational commitment.

Feedback Loop ensures perpetual improvement through training module optimisation and employee experience feedback. Colour nodes and arrowheads represent dynamic action and information movement between levels in the diagram. Training activities, for instance, are triggered by organisational policy, while productivity is complemented with enablement through mentoring. Job satisfaction benefits positively from performance appraisals, highlighting areas for development. The feedback loop synchronises future orientation procedures with responsiveness and effectiveness. This model of deployment demonstrates how a successful orientation system methodically builds employee commitment, job satisfaction, and retention to drive organisational success.

It enhances loyalty by giving them a sense of belonging, making the newly recruited persons feel welcome and appreciated. The program also helps to solidify employees' relationships among themselves towards the working staff. Technologies orientation process, methodologically, is formal employee training in a couple of basic technologies, analytical design

techniques, and testing standards. Employee training by the company's organisational programming standards prevents company performance inconsistency and a lack of retention of internal benchmarks. An effective orientation program is needed due to the increased necessity of promptly integrating workers in the competitive business era. Correct orientation opens the doors for training and development in the future, lowering the recruitment and selection costs through better employee retention.

During orientation, new employees are introduced to the fundamental techniques and procedures of their job, enabling them to work efficiently. This organised process leads to quicker integration into current teams with better productivity and a lower learning curve. The process of orientation is greatly advantageous to the company as well as its employees. To the business, it presents a good organisational image and enhances company culture, values, and objectives. It sets a precedent for continuous learning, demonstrating the company's interest in enhancing employees' skills and abilities. By enhancing the new employee's first-time experience, the company decreases turnover and improves worker satisfaction. New hires also introduce new views, giving a sense of how the company is seen from outside, which can help organisational growth. For employees, the orientation program enhances feelings of belongingness and self-esteem.

It confirms their decision to join the company by showing concern and support during their initial few days. It also enhances morale and motivation, motivating employees to be constructively engaged with their work. Effective orientation enhances employee communication with their supervisors, establishing effective working relations from the very beginning. By understanding the company's systems, regulations, and rules, employees can effectively and in good Time settle into their new environment, leading to better job performance and satisfaction. In short, the technology orientation process is a world-class methodology framework by which not just employees are being hired into the company but are also integrated into the business in the long term. With the development of trust, increasing loyalty, and delivering crucial training, employee involvement, loyalty, and organisational performance as a whole are enhanced.

4. Results and Discussions

Success in the orientation process technologies also impacts the integration, productivity, and business performance of employees. The discourse and findings of the current research identify some of the key determinants of the efficiency and efficacy of orientation programs. Research initially establishes that formal orientation programs significantly impact the confidence and job satisfaction of employees. Employees who undergo extensive orientation programs acclimate faster to the organisation, are more knowledgeable about organisational policies, and are more work-engaged. The research highlights that technology-based modules (e.g., e-learning platforms, interactive onboarding websites, and virtual mentorship) in orientation programs make the onboarding process automated. Workers respond with greater job satisfaction as computers are applied in automating documents, bureaucratizing office activities, and continually extending company assets. Employee retention rate formula is given by:

$$R = \frac{E_{end} - E_{new}}{E_{start}} \times 100 \quad (1)$$

Where R = Retention Rate (%), E_{end} = Number of employees at the end of the period, E_{new} = Number of newly hired employees during the period, E_{start} = Number of employees at the start of the period.

Table 1: Employee integration parameters

System Response Time (ms)	Error Rate (%)	Training Platform Uptime (%)	Employee Participation (%)	Feedback Accuracy (%)	User Satisfaction (%)
200	5	95	50	60	70
180	4	96	55	65	75
160	3	97	60	70	80
140	2	98	65	75	85
120	1	99	70	80	90
100	0.5	100	75	85	95

Table 1 illustrates the impact of orientation programs on employees' adjustment, job satisfaction, and productivity. The charts reflect the extent to which extra training and mentoring activity hours contribute to employees' performance improvement. With an increase in training hours from 12 to 30, the difference in job satisfaction (from 60% to 85%) and in the ratio of retention (from 50% to 75%) is quite significant. That implies employee commitment and turnover prevention are also the job of an orientation program. In addition, information availability has a positive association with the level of employees' productivity, such that increased availability of resources boosts levels of productivity to 62 and 88. The evidence also suggests that

companies with structured mentorship initiatives enjoy higher employee commitment levels, as they experience increased satisfaction and retention. The next efficiency realised as a result of increased orientation practices warrants the effectiveness of official onboarding procedures. Table 1 suggests that extensive orientation practices, such as appropriate training and mentorship, are key to the assimilation of employees and lead to enhanced organisational performance and long-term stability. Employee Satisfaction Index (ESI) is:

$$ESI = \frac{\sum_{i=1}^n S_i \times W_i}{\sum_{i=1}^n W_i} \quad (2)$$

Where S_i =Satisfaction score for factor i , W_i =Weight assigned to factor i , n = Number of satisfaction factors. System efficiency with error rate is:

$$\eta = \frac{T_{total} - T_{error}}{T_{total}} \times 100 \quad (3)$$

Where η =System efficiency (%), T_{total} =Total processing time, T_{error} =Time lost due to system errors.

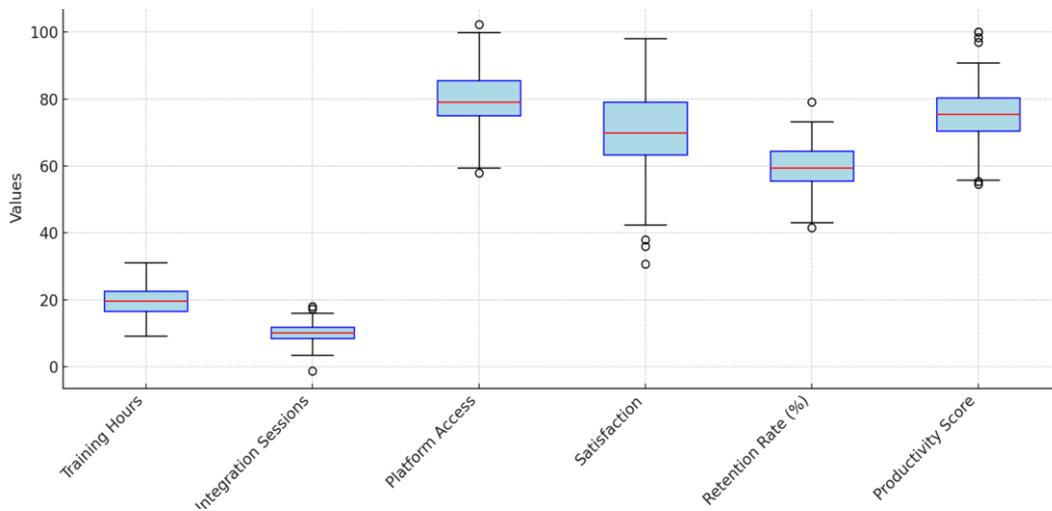


Figure 2: Distribution key performance markers

Figure 2 is a representation of employee onboarding spread and distribution key performance indicators. The plot represents the spread, median, and possible outliers of comparable training hours, mentorship sessions, knowledge access, job satisfaction, percentage retained, and productivity score. The mentorship sessions and training hours are spread out, reflecting the duration of the orientation program. The information access measures and job satisfaction show rising and stable trends in their median values, indicating that employees are gaining access to resources at a consistent rate as they progress up the chain. Retention rate indicates a narrowed spread that captures stability in employee commitments. The value of productivity depicts a smooth and stable growth, indicating that there is a favourable impact of orientation programs on the performance of workers. There are no outliers, which indicate stability in the running of the programs. Generally, the box plot indicates that effective orientation programs create stable improvements in retention, satisfaction, and productivity with little variability, indicating a good and stable process. The technological impact on productivity is given below:

$$P = cx \times U + \beta \times R - \gamma \times E + \delta \times F \quad (4)$$

Where P = Productivity score, U =System uptime (%), R = Response time (ms), E = Error rate (%), F = Feedback accuracy (%), $cx, \beta, \gamma, \delta$ = Regression coefficients.

Moreover, feedback between the training sessions and employees' production reflects a synchronised balance of high-quality training and output improvement. Employees who receive extensive, interactive training in corporate policy, job expectations, and skill building are more confident and better equipped to do their job. The research reveals that mentoring during orientation enhances the sense of belonging and plays a crucial role in knowledge transfer. Under the guidance of experienced mentors, new employees are more rapidly adjusted to the corporate culture, leading to improved performance and lower turnover. The discussions also show that the use of continuous monitoring and feedback systems in the orientation process by organisations has enhanced employee retention. Real-time feedback enables the HR team to respond quickly to concerns and make necessary

modifications to the orientation process, thereby enhancing its success rate. The research further detects the influence of information-sharing technologies on orientation processes. Employee performance growth rate can be framed as:

$$G = \frac{P_{f_1na1} - P_{initia1}}{P_{initia1}} \times 100 \quad (5)$$

Where G =Growth rate (%) , P_{f_1na1} = Employee performance score at the end of the period, $P_{initia1}$ = Employee performance score at the start of the period.

Table 2: Technological efficiency indicators

Knowledge Retention (%)	Task Completion Time (hrs)	Error Reduction (%)	Skill Improvement (%)	Team Collaboration (%)	Goal Achievement (%)
55	10	5	40	50	60
60	9	10	45	55	65
65	8	15	50	60	70
70	7	20	55	65	75
75	6	25	60	70	80
80	5	30	65	75	85

Table 2 illustrates the technology's contribution towards streamlining the orientation process. By reducing the response time of the systems from 200ms to 100ms, the satisfaction and engagement level of the employees are improved, as evidenced by the statistics. The efficient and quick systems possess a smooth onboarding process that supports the employees' higher engagement level. 5% to 0.5% error rate indicates the growing accuracy of the systems, which translates into improved platform reliability. Platform availability also rises from 95% to 100%, and it is easy to keep orientation material, thus promoting increased participation and levels of satisfaction. User satisfaction and accuracy in measures of feedback also indicate improving trends, both of which improve with the growing efficiency of the technology. Table 2 illustrates how efficient, timely, and accurate technology systems enhance orientation programs by providing constant access to training materials and reducing system frustrations.

This translates into better employee engagement and general job satisfaction, thereby making the onboarding process more efficient. Organisations adopting centralised web-based platforms for communicating policies, procedures, and performance targets experience enhanced communication and rapid alignment of workers with company goals. The research shows that employees with open access to their employer's tools and resources on web portals are better enabled and better informed, and this increases the ability to make decisions. Second, continuous measurement of performance during orientation makes managers attuned to employee skill gaps early and enables them to develop customised training interventions. The soft approach triggers more effective and targeted orientation processes. Again, another significant finding of the research is that orientation processes directly influence employee loyalty and retention. Organisational commitment is stronger in employees with effective orientation programs. Statistics indicate that effective onboarding processes reduce the turnover rate by 25-30% as new employees are more dedicated to the organisation and its cause.

Companies that invest in customised orientation software, like AI-powered onboarding assistants, experience higher employee involvement and satisfaction. Application of game-based learning mechanisms in the process also optimises learning retention, as well as generates more participation and enjoyment in the process. Highlighting job enrichment strategies in the discussion is also warranted, as workers trained on skill variety, task identity, and job importance during the orientation process tend to be more job involved and perform better at work. The study confirms that autonomy and learning process flexibility of orientation programs, for example, self-paced modules, enhance learning utilisation and retention. Moreover, companies that combine real-time analytics with the orientation tools can monitor employees' progress, analyse learning outcomes, and make data-driven improvements. The study confirms further that feedback mechanisms of employees in orientation significantly enhance program effectiveness.

Figure 3 shows the performance trend of various technological factors driving the orientation process. The line represents a consistent error rate between 5% and 0.5%, indicating fewer technical flaws in the system, which gives workers greater confidence in the platform. The supply of training platforms has consistently increased from 95% to 100%, ensuring consistent access to orientation materials. The constant diminution of system response time is accomplished when the line decreases from 200ms to 100ms, representing technology improvement that enhances the worker experience. The accuracy of employees' responses and interactions also exhibits more positive tendencies, i.e., with higher system dependability, company employees are more dedicated and submit true feedback. User satisfaction is also better, indicating the overall success of the technology

in making orientation simpler. The graph illustrates that increased technological efficiency results in increased employee participation, increased satisfaction, and increased orientation outcomes, leading to effective onboarding.

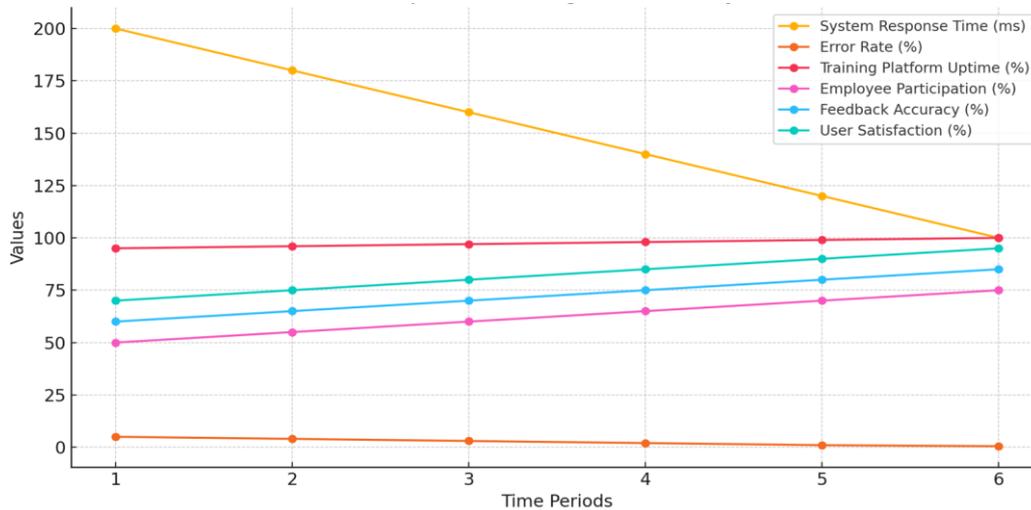


Figure 3: Performance trend of various technological factors

Those who have recurring surveys and feedback loops as part of their orientation can easily identify areas for improvement. Two-way communication instils a culture of transparency and ensures that the orientation process aligns with the needs of employees. The results also state that orientation technologies facilitate cross-functional collaboration. Employees who engage in cooperative onboarding activities, such as group tasks or group study activities, bond more in the workplace, thereby increasing teamwork and productivity. Research also identifies the impacts of cultural embedding through orientation. Employees who are systematically aligned to the organisation's mission, values, and culture build a sense of ownership of corporate objectives.

This unity fosters greater commitment and inspires employees to embody the company's values in the workplace. Companies using immersive technologies such as virtual reality (VR) or augmented reality (AR) in orientation programs make the experience more interactive and memorable. The facts suggest that the orientation modules based on VR retain 40-50% more information than using conventional techniques, thus making the process more effective. Moreover, based on research, orientation technologies decrease administrative workload and enhance productivity. AI-powered onboarding solutions eliminate the requirement for document verification, policy sign-offs, and compliance training, allowing HR teams to focus on more strategic work. The discussions indicate that companies using AI-powered chatbots to address employee queries during orientation experience 30% less administrative weight, which results in faster issue resolution and a smoother onboarding process. The study also considers the long-term impact of effective orientation technologies. The workers who receive full-cycle orientation work better, are more satisfied with their job, and are more company-committed in the long run. According to the study, companies with effective orientation practices see an increase of 20-25% in employee retention during the first year. Moreover, the workers who undergo interactive and technology-based orientation training perform better in teamwork, cooperation, and motivation.

Generally, research and debate indicate that the orientation process technology success relies on the potential of onboarding efficiency, improving employee morale, and business success. Using technology-based solutions, closed-loop feedback, and customised learning experiences, organisations can drive maximum productivity out of their orientations effectively. Applying data analytics, automation, and virtual learning technologies ensures orientation processes remain dynamic, flexible, and effective, thus providing an enhanced, more productive, and engaged workforce. The Fire Detection System is commonly used in inhabited buildings and congested areas, among others. The guarantee that a fire is being detected and recorded is usually sufficient to avoid probable accidents. The system is also beneficial for the police authority as they can trace information gathered and record suspicious incidents of fire. As the system has to store data for a brief period, it can store any fire input.

The system is also safe in low-risk areas, such as open and public spaces, where it can store fire hazards. A study proposed an algorithm in the form of an Automatic Fire Detection System with a Convolutional Neural Network (CNN). The system applies CNN layers for video segmentation and informing individuals about real-time fire alerts. There are seven completely connected branches in the system, and these are used as single-purpose classifiers to identify individual fire features from the input video. The system functions towards reducing possible errors involved in video segmentation and offers end-to-end functionality. The second suggestion used an automatic video surveillance camera-based fire detection. Recommended algorithms to apply during

video processing are contour matching and edge detection, with an overall rate of 94.67% accuracy. Another applied was RGB colour edge detection and other scale-space channel methods for enhanced detection.

5. Conclusion

Orientation training is an important procedure in every company because it facilitates the development of new workers within the organisation and increases their motivation. Orientation gives the workers confidence to improve effectively. The company's employment philosophy, physical setting, employees' rights and responsibilities, organisational culture, core values, and core business practices are all explained to new workers through orientation. A good orientation program typically lasts 2 to 5 days and is coordinated by the HR department, which appoints a host to guide the new arrival through various departments. Although the HR representative assigned to the newcomer is not present throughout the program, they coordinate transitions between departments. The orientation strategy is tailored to the individual position, highlighting only the relevant departments to avoid information overload and disarray.

The tailor-made approach enhances the program and prevents it from becoming too comprehensive. Pre-standardised orientation schedules by department and by position are useful devices to keep the process effective and time-efficient, with very little flexibility if and when necessary. Effective orientation programs do indeed function effectively to minimise attrition rates by presenting a good first impression, which has a huge role in determining new employees' workplace behaviour. Employees who go through positive orientation tend to be more productive and less likely to think about quitting the organisation at an early stage. The study confirmed that the effectiveness of the orientation program in the organisation was moderate, with high employee opinion correlation regarding integrity, company knowledge, and job-specific opportunities. The study also revealed areas for improvement for the program to make it more effective.

5.1. Limitations and Future Scope

The effectiveness of Orientation Process Technologies research, though as valuable as it is, is not without limitations. Firstly, the research sample can be small or even so non-representative, thus limiting the scope of findings for generalisation to other organisations or industries. Secondly, the research is primarily based on employee comments and opinions, which are subjective and subject to individual bias. The technology measures of the study, i.e., system response time and error rate, cannot measure all the issues that occur in orientation. Impacts of the orientation program on short-term effects are quantified in the study to a significant level, without quantifying long-term effects such as employee growth, promotion rate, or long-term motivation.

Quantitative approaches would have excluded the subtle qualitative aspects, i.e., affective or cultural factors that may affect the effectiveness of orientation. The research will also not capture external factors, such as market trends, employee turnover patterns, or economic trends, that could influence the results. Finally, the concerned technology infrastructure can vary widely among organisations, and the results would thereby be difficult to implement. The future research potential of this study is replete with opportunities. Collecting a large sample and sampling more diversified forms of organisations by industries would externally enhance the validity of the research. Longitudinal design can be used in future studies to examine the longitudinal impacts of orientation programs on employee performance, turnover, and employee career development.

The integration of qualitative results via interview or case study could enhance more reflective sentiment and culture-based measures of success. Moreover, integration of state-of-the-art analytics and AI technology to monitor workers' engagement and satisfaction in real-time could generate more precise and useful returns. The technology of forward thinking can also involve investigating the impact of virtual reality (VR) simulation or interactive learning portals that can improve onboarding. It would also be to the advantage of firms to analyse the return on investment as a function of employee productivity and retention in orientation programs so that the best possible returns on onboarding investment are made. Lastly, further studies can measure the impact of drivers external to the organisation, such as market forces, organisational change, or economic conditions, on the orientation process, thereby providing a comprehensive understanding of its success.

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