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Human Resource Recruitment and Onboarding Practices in A Technology - Driven Startup

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Abstract-- Human Resource (HR) recruitment and onboarding practices are fundamental to the success and sustainability of technology-driven startups, particularly in emerging sectors such as agri-drone services. These organizations operate in highly dynamic environments where the availability of skilled employees, speed of hiring, and effective employee integration play a critical role in achieving business objectives.

This study aims to examine the effectiveness of recruitment and onboarding processes in a drone-based startup, with a specific focus on hiring efficiency, employee integration, and early employee retention. A descriptive research design was adopted for this study. The analysis is primarily based on organizational HR data, including recruitment funnel reports, hiring timelines, onboarding duration records, and employee attrition data collected over a period of 12 months.

The findings of the study reveal several critical challenges affecting HR effectiveness within the organization. These include prolonged hiring cycles, high candidate drop-out rates during recruitment, lack of structured onboarding programs, and a significant level of employee attrition within the first six months of employment. These issues collectively impact workforce stability, productivity, and overall organizational performance.

The study concludes that the implementation of structured onboarding frameworks, adoption of digital recruitment tools such as AI-based screening systems, and improved coordination between HR and operational departments can significantly enhance recruitment efficiency and employee retention.

The research highlights the need for startups to integrate strategic HR practices with technological solutions to build a stable, skilled, and engaged workforce.

Keywords-- Human Resource Management, Recruitment, Onboarding, Startup HR, Employee Retention, Drone Technology, AgriTech

I. INTRODUCTION

The modern business environment is characterized by rapid technological advancement, increased competition, and the emergence of innovative startups.

Technology-driven startups, particularly in sectors like drone technology and agriculture, require efficient human resource management to sustain growth and innovation.

Recruitment and onboarding are two critical HR functions that directly influence employee productivity, engagement, and retention. Recruitment involves identifying and selecting suitable candidates, while onboarding ensures that new employees are effectively integrated into the organization.

Drone-based startups operate in dynamic environments and require skilled professionals such as drone pilots, engineers, and analysts. Managing such a workforce requires efficient recruitment strategies and structured onboarding systems.

This study aims to analyze recruitment and onboarding practices in a technology-driven agri-drone startup and evaluate their impact on employee retention and organizational performance.

II. LITERATURE REVIEW

2.1 Recruitment Practices

Recruitment is considered a strategic function of HRM. According to various studies, organizations that follow structured recruitment processes are more successful in attracting qualified candidates and reducing employee turnover. Effective recruitment includes job analysis, sourcing, screening, interviewing, and selection.

2.2 Onboarding Practices

Onboarding plays a crucial role in employee integration. Research indicates that organizations with structured onboarding programs experience higher employee engagement, faster productivity, and improved retention rates. Onboarding includes orientation, training, and continuous support.



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2.3 Digital Transformation in HR

The adoption of digital technologies such as Artificial Intelligence (AI), HRMS, and data analytics has transformed HR practices. These technologies improve recruitment speed, accuracy, and efficiency while reducing manual workload.

2.4 HR Challenges in Startups

Startups face several HR challenges, including:

- Limited financial resources
- High competition for skilled talent
- Lack of structured HR systems
- Rapid organizational changes

2.5 Research Gap

Although many studies have explored recruitment and onboarding separately, limited research has focused on their combined impact in technology-driven drone startups. This study aims to fill this gap.

III. RESEARCH METHODOLOGY

3.1 Research Design

The study adopts a descriptive research design to analyze the recruitment and onboarding practices in a technology-driven agri-drone startup. This type of research design is used to describe the current situation, processes, and practices followed within the organization without manipulating any variables.

Descriptive research helps in understanding how HR functions such as recruitment, candidate selection, and onboarding are carried out in real-time. It also helps in identifying issues like delays in hiring, lack of structured onboarding, and employee attrition. The design is suitable for this study as it focuses on observing and analyzing existing HR practices rather than testing any hypothesis.

3.2 Data Sources

The study is based on both primary and secondary data, which ensures a comprehensive and reliable analysis.

Primary Data

Primary data was collected directly from employees and HR personnel in the organization. This includes:

- Employee feedback on recruitment experience
- Opinions on onboarding process and training
- Interaction with HR staff
- Observations during HR activities

This data helps in understanding the real experiences and perceptions of employees regarding HR practices.

Secondary Data

Secondary data was collected from various internal and external sources such as:

- **HR records:** employee details, joining dates, attendance
- **Recruitment reports:** number of applicants, selection ratio, hiring time
- **Onboarding data:** training schedules, induction programs
- **Academic journals:** to support theoretical understanding

Secondary data helps in validating the primary data and provides a structured base for analysis.

3.3 Sample

The sample for the study includes individuals who are directly or indirectly involved in recruitment and onboarding processes within the organization.

- **HR Personnel:** responsible for recruitment, selection, and onboarding activities
- **Employees:** newly joined and existing employees who experienced onboarding
- **Management Staff:** involved in hiring decisions and workforce planning

The selection of these respondents ensures that the study covers different perspectives and provides a complete understanding of HR practices.

3.4 Tools Used for Analysis

The collected data was analyzed using simple and effective tools:

- *Percentage Analysis*

Percentage analysis is used to interpret employee responses and identify trends. It helps in understanding the proportion of employees satisfied with recruitment and onboarding processes.

- *Tabular Analysis*

Data is organized in tables to present information clearly and systematically. It helps in comparing responses and identifying patterns.

- *Graphical Representation*

Charts and graphs (such as bar charts or pie charts) are used to visually represent data. This makes it easier to understand trends like attrition rate, recruitment efficiency, and employee satisfaction.

IV. DATA ANALYSIS AND INTERPRETATION

4.1 Recruitment Funnel Analysis

For this study, recruitment data collected over a 12-month period was analyzed to understand how candidates progressed through different stages of the hiring process in the technology-driven drone startup.

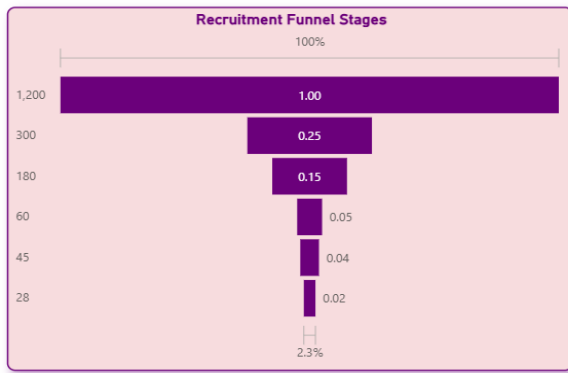


Fig 1: Recruitment Funnel Stages

Interpretation:

Only **2.3%** became long-term employees; **900** were rejected, **120** missed interviews, **15** did not join, and **17** left within 6 months.

4.2 Time Taken to Hire Analysis

To evaluate hiring efficiency, the organization's HR records were analyzed to identify the average number of days required to fill different job roles during the last 12 months.

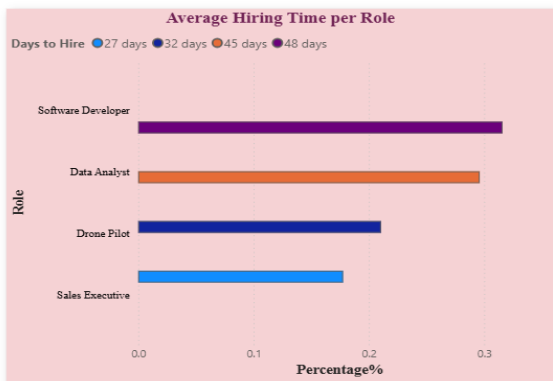


Fig 2: Average Hiring Time per Role

Interpretation:

Software Developer has the highest hiring time (**48 days**), Sales Executive the lowest (**27 days**), and the average is **38 days**, which may lead to losing talented candidates.

4.3 Onboarding Time Analysis

To evaluate onboarding effectiveness, HR training and performance records were analyzed to identify the average number of days required for new employees to become fully productive in different departments.

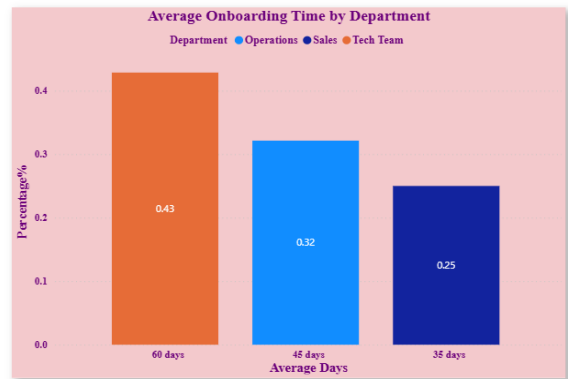


Fig 3: Average Onboarding Time by Department

Interpretation:

Tech Team has the longest onboarding time (**60 days**), Sales Team the lowest (**35 days**), and all departments exceed the ideal **30 days**, delaying productivity and increasing early attrition.

4.4 Early Employee Attrition Analysis (Major Problem)

Based on HR exit records from the last 12 months, the reasons for employees leaving within the first six months were analyzed.

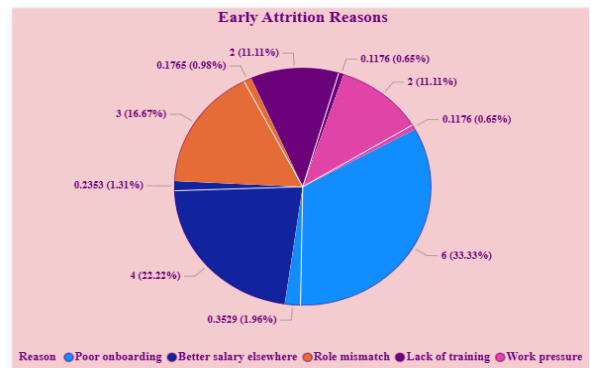


Fig 4: Early Attrition Reasons



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Interpretation:

Poor onboarding is the main reason for attrition (33.33%), followed by better salary elsewhere (22.22%) and role mismatch (16.67%), showing weak onboarding and retention strategies.

V. Findings

The study on recruitment and onboarding practices in the agri-drone startup reveals the following key findings:

1. The recruitment process is structured but time-consuming, leading to delays in hiring decisions.
2. There is a low candidate conversion rate, as many applicants drop out due to slow communication and better opportunities elsewhere.
3. The onboarding process is partially implemented but lacks proper structure and consistency.
4. New employees face challenges in understanding their roles due to limited training and lack of guidance during onboarding.
5. There is no formal mentorship or buddy system, which affects employee integration into the organization.
6. Employee satisfaction with HR practices is moderate, mainly due to communication gaps and delayed HR responses.
7. A high level of employee attrition is observed, especially within the first six months of joining.
8. The organization uses basic HR systems, but advanced digital tools for recruitment and onboarding are not fully utilized.
9. Overall, HR practices are functional but not strategically optimized, indicating a need for improvement in efficiency, communication, and technology adoption.

VI. SUGGESTIONS

- Reduce recruitment time by streamlining interviews and speeding up decisions.
- Improve candidate communication with timely updates
- Use AI/ATS tools for faster recruitment
- Implement structured onboarding with training and clear roles
- Introduce a mentorship system for new employees
- Provide clear job roles and responsibilities
- Conduct regular training programs
- Improve HR support and quick response

VII. CONCLUSION

This study focuses on analyzing the recruitment and onboarding practices in a technology-driven agri-drone startup and their impact on employee retention and organizational performance. In today's competitive and innovation-driven environment, startups require efficient Human Resource (HR) practices to attract skilled employees and ensure their effective integration into the organization.

The findings of the study indicate that while the organization has established basic recruitment and onboarding processes, there are several areas that require improvement. The recruitment process is structured but slow, which leads to delays in hiring decisions and increases the chances of losing potential candidates. A lengthy recruitment cycle also affects the organization's ability to compete for skilled talent in the market.

The onboarding process, although present, lacks proper structure and consistency. Employees reported issues such as limited training, unclear job roles, and lack of guidance during their initial stages. This results in confusion, reduced productivity, and difficulty in adapting to the organizational environment. The absence of a mentorship or support system further affects employee confidence and engagement.

One of the major concerns highlighted in the study is the high level of employee attrition, particularly within the first six months of joining. This indicates a strong connection between recruitment inefficiencies, poor onboarding practices, and employee dissatisfaction. Factors such as role mismatch, lack of career growth opportunities, and better job offers contribute to early employee turnover.

The study also emphasizes the role of communication and transparency in improving HR effectiveness. Employees expect timely updates, clear information, and quick responses from the HR department. Any gap in communication can negatively impact employee experience and satisfaction.

In addition, the use of technology in HR practices is identified as an important factor in improving efficiency. While the organization uses basic HR systems, there is a need to adopt advanced digital tools such as Applicant Tracking Systems (ATS) and HRMS to streamline recruitment and onboarding processes.

In conclusion, recruitment and onboarding are critical functions that directly influence employee performance, satisfaction, and retention. By improving hiring efficiency, implementing structured onboarding programs, enhancing communication, and adopting digital HR solutions, the organization can build a strong and stable workforce.



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Effective HR practices will not only reduce employee attrition but also contribute to the long-term growth and success of the startup.

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