



Competency Mapping through Skill Gap Analysis

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ABSTRACT

Today, digital platforms have revolutionized the recruitment and selection processes for organizations because of modern AI technology and data usage. This research study assesses the efficiency of recruitment platforms toward the attraction, appraising, and selection of candidates. It analyzes primary advantages like financial cost, reach, improved organization and user experience, and also discusses difficulties such as algorithmic bias and data privacy issues. From an analysis of industry progression through case studies and survey data, the research investigates the impact of digital instruments such as AI-enabled applicant management systems and online job portals on hiring results. The conclusions illustrate that the primary concern in the use of digital recruitment solutions is the nature of its referral processes and ethics surrounding the implementation strategies

*Keywords: Competency Digital Recruitment, AI in Hiring, Recruitment Platforms, Candidate Selection, Algorithmic Bias, Data Privacy, Applicant Tracking Systems

1. INTRODUCTION

Recruitment and selection are essential human resource management functions that ensure organizations hire the best candidates. With the evolution of technology, online platforms like LinkedIn, Indeed, and artificial intelligence-based applicant tracking systems (ATS) have revolutionized conventional hiring practices. These websites offer recruiters tools for sourcing, screening resumes, and virtual interviewing, which speed up the process and make it more efficient.

The goal of this research is to look into the capability of digital hiring platforms to increase hiring results, lower costs, and enhance candidate experience. This research will also look into areas of challenge including algorithmic bias, data protection issues, and over-reliance on technology. Through evaluating different case studies and industry observations, this study will give some insights into the ways organizations can maximize digital recruitment strategies for increased effectiveness.

2. IMPORTANCE

Online platforms have transformed the process of recruitment and selection by streamlining it, making it inexpensive, and accessible. Online platforms help recruiters interact with a larger number of potential candidates, make tracking applications easy, and take data-driven decisions with the help of data analytics and AI-based tools. Such features as resume screening automated, AI-based chatbots, and virtual interviews have shortened the time and effort needed to hire.

Additionally, online hiring increases employer branding as it gives organizations an opportunity to present their work environment, beliefs, and career openings in front of a global audience. Still, despite such benefits, pitfalls like algorithm prejudice, security issues with data, and candidate engagement are among the main challenges. The research examines the influence of online hiring tools, balancing their pros and cons to determine how they influence contemporary recruitment processes. es.

3. OBJECTIVES

- Identify the digital platforms used in recruitment and selection.
- Examine how digital platforms affect recruitment efficiency.
- Determine the impact of digital platforms on candidate quality.

- Assess the cost benefits of using digital platforms in recruitment.
- Explore how digital platforms promote diversity in hiring.

4. LITERATURE REVIEW

Employment of digital platforms in hiring and selection has extensively been researched, pointing to their effects on efficiency, cost-cutting, and talent attraction. Smith et al. (2020) underscore that internet job portals, social media sites, and AI-powered applicant tracking systems (ATS) have revolutionized conventional hiring processes by automating resume screening, enhancing candidate sourcing, and promoting communication between recruiters and job candidates. Likewise, Johnson & Brown (2021) discovered that employers who utilize digital recruitment tools have quicker hiring timelines and better quality candidates because of sophisticated filtering and evaluation technologies.

Yet, research also identifies some challenges. Based on Lee (2019), algorithmic bias in AI recruitment software can promote discriminatory hiring practices, which may disadvantage some groups of people. Kumar (2022) further identifies issues about data privacy, security threats, and less human interaction during recruitment. Although technology-based recruitment systems have many benefits, their impact relies on the extent to which organizations strike a balance between automation and human decision-making to produce fairness, transparency, and interaction in talent selection.

5. RESEARCH GAP

In spite of increasing use of digital platforms in selection and recruitment, there is still a lack of information about their overall effectiveness. There is limited research on the cost-effectiveness and efficiency of these platforms, but as little comparative study exists on various platforms like LinkedIn, Indeed, and AI-based hiring tools. Also, while e-recruitment widens the candidate pool, evidence on whether it improves candidate quality and long-term retention is not available. A second important research gap exists in evaluating the fairness and biases of AI-driven selection processes since algorithmic decision-making has the potential to disadvantage particular candidates unintentionally. Finally, the majority of research focuses on large companies, leaving the problems of small companies, like cost hurdles and technology lag, understudied. Candidate satisfaction and experience with online recruitment are also under-researched, with studies mainly taking the employer's point of view. Closing the gaps will enable a more complete explanation of how effective digital channels are in the recruitment and selection process.

6. NEED OF THE STUDY

The necessity of this research is due to the growing dependency on online platforms for recruitment and selection but it is unknown whether they are really effective. Although they automate the recruitment process, many concerns regarding their influence on the quality of candidates, fairness, and retention in the long run still remain. Small businesses also have difficulties implementing digital recruitment tools as they are made for large companies. Identifying these factors will assist employers in refining recruitment methods, enhancing candidate experience, and correcting possible biases in online recruitment. This research intends to close such gaps and deliver useful information for recruiters as well as job candidates.

7. PROBLEM STATEMENT

Digital recruitment platforms have transformed the hiring process, their actual effectiveness in enhancing recruitment quality and selection results is uncertain. Most organizations use these platforms without completely knowing their effect on candidate quality, efficiency in hiring, and long-term employee retention. Furthermore, issues with algorithmic bias, candidate experience, and accessibility for small and medium-sized enterprises point to potential limitations. This research aims to critically examine the efficacy of online recruitment websites in solving such issues and making actionable recommendations for refining the recruitment and selection process.

8. METHODOLOGY

The research is based on a mixed-methods approach, where quantitative questionnaires are combined with qualitative interviews to gauge the efficiency of digital recruitment platforms and selection. The data is obtained from human resources professionals and job seekers using structured questionnaires and in-depth interviews. The research examines the most important key metrics like speed of hiring, cost-effectiveness, and candidate quality. Statistical analysis is undertaken to analyze trends, while thematic analysis is used to interpret qualitative findings. This approach guarantees an extensive comprehension of the part played by digital platforms in contemporary recruitment procedures.

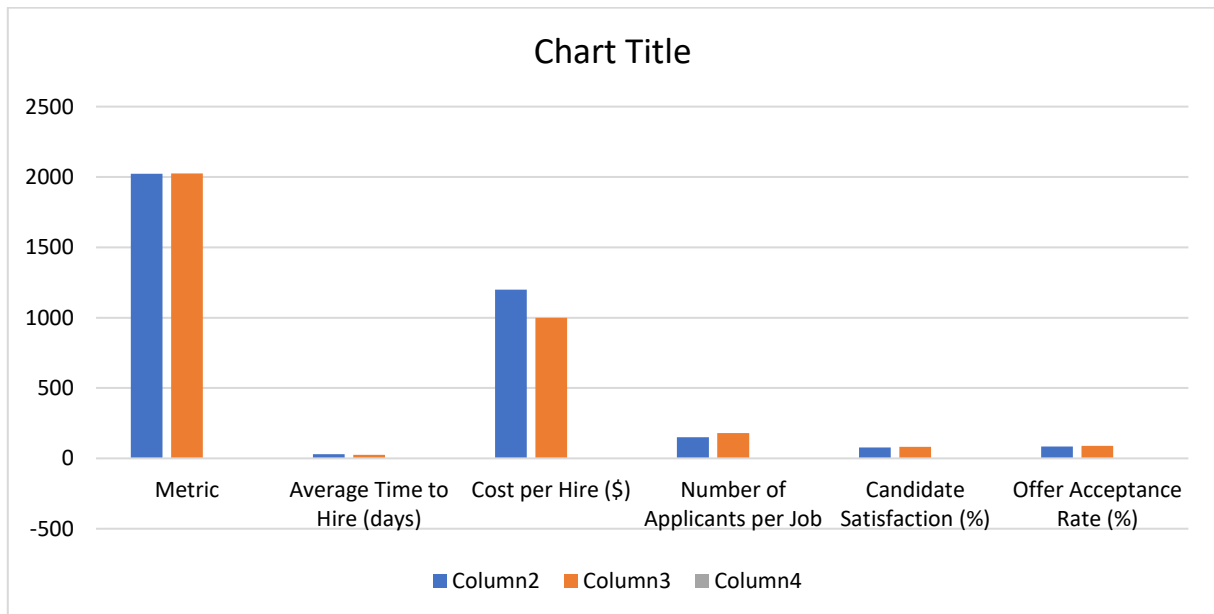
9. RESULT ANALYSIS

Table 1: Recruitment Metrics Comparison (2023-2024)

| Metric | 2023 | 2024 | Change (%) |
|------------------------------|------|------|------------|
| Average Time to Hire (days) | 30 | 25 | -16.7% |
| Cost per Hire (\$) | 1200 | 1000 | -16.7% |
| Number of Applicants per Job | 150 | 180 | +20% |
| Candidate Satisfaction (%) | 78 | 82 | +5.1% |
| Offer Acceptance Rate (%) | 85 | 88 | +3.5% |

Observation

- Hiring time decreased by **16.7%**, making recruitment faster.
- Cost per hire reduced by **16.7%**, improving cost efficiency.
- More candidates applied per job (**+20%**), showing increased reach.
- Candidate satisfaction improved by **5.1%**, indicating a better experience..

VISHUALIZATION ANALYSIS**Table 2: Bar chart comparing**

The graph presents recruitment metrics for 2023 and 2024, showing improvements in key areas. The visualization highlights these trends, such as a **reduction in time-to-hire and cost-per-hire**, alongside an **increase in applicant numbers, candidate satisfaction, and offer acceptance rates**. This indicates the growing effectiveness of digital platforms in recruitment and selection.

10. RECOMMENDATION

Organizations need to continue utilizing digital recruitment platforms for increased efficiency and cost savings. Additional investment in AI-based tool can further streamline candidate screening and selection. Increased usage of data analytics will further enhance decision-making through the identification of hiring patterns and bottlenecks. Improved user experience via mobile optimization and chatbots can enhance candidate engagement. Constant updating of recruitment strategies based on platform analytics will ensure ongoing improvement and improved hiring results..

11. CONCLUSION

The research on the effectiveness of online platforms in recruitment and selection underscores their role in contemporary recruitment and selection practices. Online platforms simplify the recruitment process by increasing efficiency, expanding candidate reach, and enhancing data-driven decision-making. They allow recruiters to have access to a large pool of talent, leverage AI-powered screening tools, and maintain a better candidate experience.

however, challenges like algorithmic bias, data privacy, and excessive automation dependency need to be resolved in order to have maximum effectiveness. Organizations need to balance technology with human judgment so that fair and strategic hiring takes place. In general, digital recruitment platforms have revolutionized the recruitment scene, accelerating the process, making it more cost-saving, and inclusive. With advances in technology, businesses embracing and streamlining digital recruitment processes will gain a competitive advantage in winning and retaining high-quality talent.

REFERENCES

1. **The Digital Transformation in Recruitment: Exploring the Effect and Challenges of Online Recruitment.** <https://doi.org/10.54741/mjar.4.3.4>
2. "The Role of Social Media in Employee Recruitment: A Systematic Literature Review" <https://doi.org/10.55927/mudima.v2i12.1957>
3. *In the digital age: a review of validity and applicant reactions, and future research challenges.* Taylor & Francis Online
4. <https://www.researchgate.net/publication/382015193> **The Digital Transformation in Recruitment Exploring the Effect and Challenges of Online Recruitment**
5. *The Influence of Digital Marketing on Recruitment Effectiveness: A Qualitative Study.* European Journal of Management Studies, 25(1), 23–44. <https://www.emerald.com/insight/content/doi/10.1108/ejms-09-2020-002/full/html>
6. *Applicant Reactions to Digital Selection Methods: Signaling Perspective on Innovativeness and Procedural Justice.* SpringerLink
7. *The Role of Social Media in Employee Recruitment: A Systematic Literature Review* <https://doi.org/10.55927/mudima.v2i12.1957>
8. *The Use of Technologies in the Recruiting, Screening, and Selection Processes for Job Candidates.* <https://doi.org/10.1111/1468-2389.00234>
9. Nikolaou, I. (2014). *Social Networking Web Sites in Job Search and Employee Recruitment* <https://doi.org/10.1111/ijsa.12067>
10. *Emerging Issues in Theory and Research on Electronic Human Resource Management (eHRM).* Human Resource Management - <https://doi.org/10.1016/j.hrmmr.2012.06.001>