

Workforce Diversity, Digital Capability and Employee Performance: Evidence from IT/ITES Organizations in Karnataka.

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Abstract

Workforce diversity has become a critical phenomenon in organizations in which the workforce's knowledge, skills, and adaptability have a significant impact on the company's overall performance. This paper aims to study the relationship between workforce diversity, digital capability and employees' performance amongst employees of IT/ITES organizations in Karnataka. This study considers age, gender and educational diversity as the parameters for workforce diversity and digital capability as one of the influencing factors that impacts the employees' performance. A quantitative research design of descriptive type with cross sectional method has been followed to analyse the data. The primary data was collected from a sample of 130 employees through a structured questionnaire based on five-point likert scale. The data are analysed using descriptive statistics, reliability, correlation and regression methods along with mediation analysis. The results show that diversity has a positive and significant impact on digital capability ($\beta = 0.451$, $p < 0.001$). Also, digital capability influences positively and significantly the employees' performance ($\beta = 0.593$, $p < 0.001$) whereas the influence of workforce diversity also significant on direct effect on employees' performance ($\beta = 0.382$, $p < 0.001$). The finding also shows that digital capability influences significantly both workforce diversity and employees' performance as partial mediation. These results provide that with having effective workforce diversity policies organizations need also develop their digital capability in order to promote the performance among its employees in IT/ITES institutions.

Keywords: Workforce Diversity, Digital Capability, Employee Performance, IT/ITES, Mediation.

1. INTRODUCTION

The characteristics of today's workforce have changed significantly as more and more companies have transformed their operations into high-tech and knowledge-based ones. The members of the contemporary workforce are different from each other in terms of age, gender, educational qualification, work experience, knowledge, and skills. This differences in workforce have become one of the key sources of organizational diversity, offering potential benefits of diverse perspectives, skills, and approaches to problem-solving. However, diversity does not always impact organizational performance positively, as differences among employees could lead to misunderstandings, socialization, and other challenges, particularly when diverse groups are not properly managed. Therefore, understanding the influence of diversity on employee performance is of paramount importance to the field of human resource management.

The importance of workforce diversity is particularly evident in the information technology and information technology-enabled services (IT/ITES) sector. These types of organisations depend heavily on knowledge, innovation, collaboration and employees' ability to adapt to rapidly changing technologies.

The employees should be able to acquire and apply digital skills, adapt to emerging technologies, utilize digital tools in work processes and develop technology-enabled solutions. At present organisations increasingly rely on artificial intelligence, cloud computing, data analytics, and other technologies are increasingly being utilized in business processes for performing simple and complex transactions and operations.

In the IT/ITES industry, the ability to work in tandem with constantly evolving technologies presents a critical performance lever. With diverse competencies and levels of education and professional experience, IT employees are

often required to acquire new skills in different areas of technology. The concept of digital capability can be leveraged to address the key question: how can workforce diversity lead to higher employee performance in the IT/ITES industry? A natural experiment can be conducted in Karnataka due to the presence of a substantial IT/ITES sector. IT/ITES companies in Karnataka operate in a technology-driven environment where processes and procedures are subject to frequent changes while relying on the knowledge and skills of their employees. Few studies address the relationship between workforce diversity and digital capability in Karnataka's IT/ITES firms, despite the criticality of the relationship on organizational performance.

This paper proposes a theoretical framework that examines how digital capability drives the influence of workforce diversity on employee performance. The study will focus on age, gender, and educational workforce diversity as a critical source of human capital heterogeneity in the IT/ITES industry. Similarly, digital skills, technology adaptability, digital work practices, and digital innovation will be examined as vital aspects of digital capability. The study will review employee performance from the perspective of task, contextual, and adaptive performance while relying mainly on the Resource-Based View and partly on Dynamic Capabilities as the theoretical basis. It is argued that workforce diversity offers heterogeneous human capital, whereas digital capability enables employees to harness the potential of various combinations of human capital in realizing personal and organizational goals, given the dynamism of the IT/ITES industry. Therefore, the paper will review the influence of workforce diversity and digital capability on employee performance in the IT/ITES industry in Karnataka.

2. LITERATURE REVIEW

Workforce diversity has become an important organizational resource as firms seek to benefit from the diverse knowledge, skills, and perspectives of their employees. In the IT/ITES sector, age, gender, and education diversity can enable workers to bring complementary skills and approaches to problem-solving. Karwal and Tandon (2022) conducted a study on age, gender, and education diversity in the Indian IT industry. The authors found that these diversity aspects could be leveraged to improve employee productivity and performance. Similarly, Kundu and Mor (2017) found that diversity perceptions and management practices in the Indian IT industry were positively associated with organizational performance. Both works highlight the potential of workforce diversity to influence technology-based industries. However, the focus has been on the role of diversity in organizational performance rather than the mechanisms through which it can influence performance, specifically digital capabilities.

The link between workforce diversity and digital capability stems from the potential of the former to provide the human capital resource with diverse, complementary skill sets. For example, individuals with different ages and levels of education will bring varying experiences, approaches to learning, and competencies. Through such mechanisms, workforce diversity can enable knowledge sharing, learning, and adaptation, which are vital aspects of organizational digital capability. The current literature regarding digital skills gaps reveals that organizational digital capability is determined by technology-related competencies as well as processes and structures that promote the continuous development of such competencies (Rashid et al., 2025). Therefore, workforce diversity can enrich an organization through a deeper and more extensive pool of human capabilities, which constitutes digital capability.

Digital capability, in turn, is increasingly important in influencing employee performance, particularly in technologically advanced economies and organizations. Digital capability enhances employees' ability to adopt and implement technology in their practices, adapt to technological change, and engage with technology to maximize performance. Joshi and Triwedi (2026) conducted a study on digital capability and employee performance in public sector banks in India. The authors found that digital capability and employee performance were positively associated with each other and with organizational performance. In another study, on employee dynamic capability and digital performance in Chinese SMEs, researchers found that employees' dynamic capabilities have a positive influence on their digital performance, particularly under disruptive conditions (Zhang et al., 2024). Finally, a recent systematic meta-analysis found that workplace digital technologies can have an impact on employee-related outcomes, depending on how they are implemented (Zhang et al., 2025). Overall, this body of work demonstrates the importance of digital capability to employee performance.

Together, these insights can be synthesized into a theory that highlights the potential of workforce diversity to influence employee performance, both directly and through the mediation of digital capability. However, there is limited direct evidence on the mechanisms through which workforce diversity can influence employee performance. Diversity studies

have predominantly focused on the direct linkages between workforce diversity and employee or organizational performance, while the literature on organizational digitalization has predominantly focused on technology, processes, or employee competencies in isolation. The mediating influence of digital capability has not been adequately considered. Therefore, this paper tests the hypothesis that workforce diversity predicts digital capability, which, in turn, influences employee performance. Additionally, the paper hypothesizes that digital capability mediates the association between workforce diversity and employee performance for employees in the IT/ITES sector in Karnataka.

2.1 Research Gap

Although prior research has focused on workforce diversity and employee performance, few have investigated the intervening role of digital capability to understand diverse workforce-performance linkages, especially in technology-intensive organizations. Further, in the literature, there are contradictory results about the influence of age, gender, and educational diversity on diverse employee performance outcomes. Additionally, there is a lack of research evidence on the role played by digital capability in diverse workforce-performance linkages, particularly among employees working in the rapidly evolving digital workplace of IT/ITES organizations in Karnataka. Consequently, this research focuses on establishing the intervening role of digital capability in diverse workforce-performance linkages among employees of IT/ITES organizations in Karnataka.

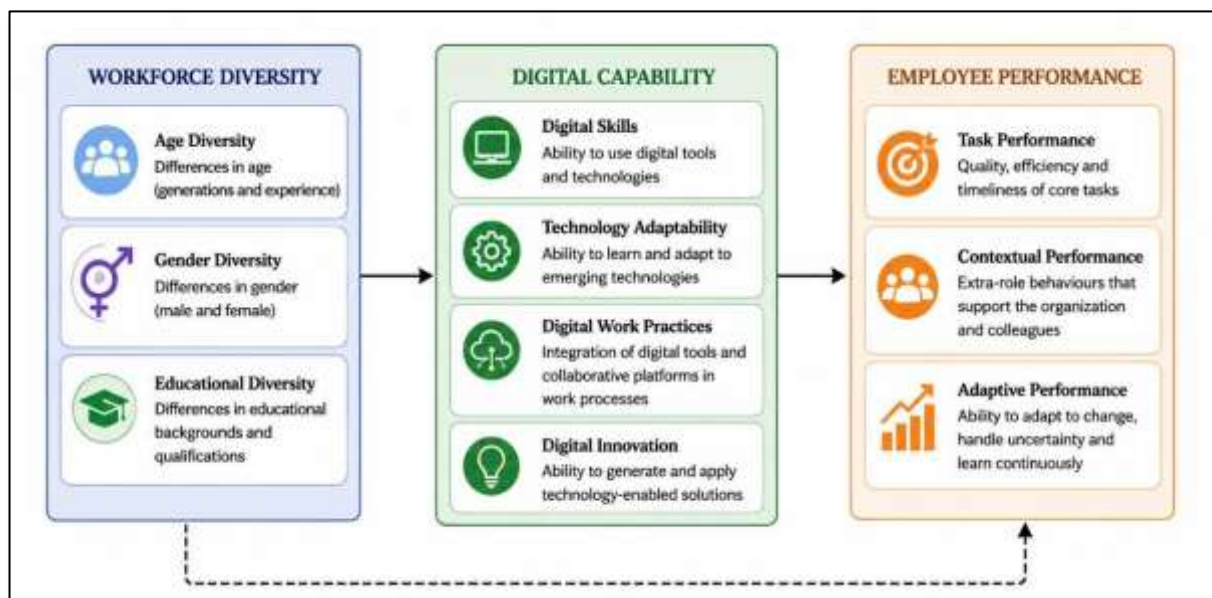
3. OBJECTIVES OF THE STUDY

1. To establish the influence of workforce diversity on digital capability of employees of IT/ITES organizations in Karnataka.
2. To assess the impact of digital capability on employee performance of employees of IT/ITES organizations in Karnataka.
4. To evaluate the intervening role of digital capability in diverse workforce-performance linkages among employees of IT/ITES organizations in Karnataka.

3.1 Hypotheses of the Study

1. H1: There is a significant positive influence of workforce diversity on digital capability of employees of IT/ITES organizations in Karnataka.
2. H2: There is a significant positive influence of digital capability on employee performance of employees of IT/ITES organizations in Karnataka.
3. H3: There is a significant positive influence of workforce diversity on employee performance of employees of IT/ITES organizations in Karnataka.
4. H4: There is a significant mediating role of digital capability in diverse workforce-performance linkages among employees of IT/ITES organizations in Karnataka.

Figure 01: Theoretical framework



4. METHODOLOGY

The study will adopt a quantitative and cross-sectional design to establish relationships between workforce diversity, employee performance, and digital capability. The study's population consists of employees in IT/ITES organizations in Karnataka. The purposive sampling method is used to select respondents based on their experience with organizational processes and digital tools. Primary data will be collected through a structural questionnaire using five-point Likert scale ranging from 1 disagree to 5 agree. Workforce diversity will include age, gender, and educational diversity while digital capability will consist of digital skills, technology adaptability, digital work practices, and digital innovation. Employee performance will be assessed through task, contextual and adaptive performance. Data will be analysed using SPSS. Descriptive statistics and Cronbach's alpha will be used for preliminary analysis. Regression analysis and bootstrapping will be employed to examine the proposed relationships and the mediating role of digital capability.

5. DATA ANALYSIS AND RESULTS

Table 1: Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	76	58.5
	Female	54	41.5
Age	21–30 years	43	33.1
	31–40 years	62	47.7
	41–50 years	19	14.6
	Above 50 years	6	4.6
Educational Qualification	Graduate	76	58.5
	Postgraduate	48	36.9
	Other	6	4.6
Work Experience	Below 5 years	42	32.3
	5–10 years	65	50.0
	Above 10 years	23	17.7
Total		130	100.0

The sample size of the study was 130 participants of which 58.5% were male while 41.5% were female. In addition, 47.7% of the participants were in the age bracket of 31-40, 58.5% had attained graduation as their highest level of education and 50% had between 5-10 years of work experience. The sample is, therefore, a representation of a moderately experienced IT/ITES workforce with a graduate level of education.

Table 2: Reliability and Descriptive Statistics

Variable	Items	Cronbach's α	Mean	SD
Workforce Diversity	12	0.842	3.76	0.64
Digital Capability	16	0.889	3.88	0.61
Employee Performance	12	0.876	3.94	0.58

The results suggest that all three variables have a satisfactory level of internal consistency since the Cronbach's alpha for each is above 0.8, with the scores ranging between 0.842 and 0.889. The items have relatively high mean scores, with the highest score being recorded for employee performance ($M = 3.94$) and the lowest one for workforce diversity ($M = 3.76$).

Table 3: Regression Results

Hypothesis	Relationship	β	R ²	p-value	Result
H1	Workforce Diversity → Digital Capability	0.451	0.203	<0.001	Supported
H2	Digital Capability → Employee Performance	0.593	0.352	<0.001	Supported
H3	Workforce Diversity → Employee Performance	0.382	0.146	<0.001	Supported

The regression results show that all three proposed relationships are positive and statistically significant. Workforce diversity significantly predicts digital capability ($\beta = 0.451$, $R^2 = 0.203$, $p < 0.001$). Digital capability has the strongest effect on employee performance ($\beta = 0.593$, $R^2 = 0.352$, $p < 0.001$). Workforce diversity also significantly influences employee performance ($\beta = 0.382$, $R^2 = 0.146$, $p < 0.001$). Thus, H1, H2 and H3 are supported.

Table 4: Mediation Analysis

Relationship	Effect (β)	p-value	95% CI	Result
Direct effect: WD → EP	0.168	0.035	0.012–0.324	Significant
Indirect effect: WD → DC → EP	0.215	<0.001	0.108–0.338	Significant
Total effect: WD → EP	0.383	<0.001	0.221–0.545	Significant

The mediation analysis indicates that digital capability significantly mediates the relationship between workforce diversity and employee performance. The direct effect remains significant ($\beta = 0.168$, $p = 0.035$), while the indirect effect through digital capability is also significant ($\beta = 0.215$, $p < 0.001$; 95% CI: 0.108–0.338). Thus, the results indicate partial mediation, supporting H4.

Table 5: Hypothesis Summary

Hypothesis	Statement	Decision
H1	Workforce diversity significantly influences digital capability.	Supported
H2	Digital capability significantly influences employee performance.	Supported
H3	Workforce diversity significantly influences employee performance.	Supported
H4	Digital capability mediates the relationship between workforce diversity and employee performance.	Supported

The hypothesis testing results show that all four proposed hypotheses are supported. Workforce diversity significantly influences both digital capability and employee performance, while digital capability significantly influences employee performance. Further, digital capability significantly mediates the relationship between workforce diversity and employee performance, confirming its role as an important mechanism in the proposed model.

6. FINDINGS

The results revealed that the level of workforce diversity, digital capability, and employee performance of the IT/ITES firms in Karnataka were significantly related to one another. Workforce diversity was found to have a positive and significant effect on digital capability ($\beta = 0.451$, $R^2 = 0.203$, $p < 0.001$), thus providing support to the H1. Digital capability was found to have a more substantial positive influence on the employees' performance ($\beta = 0.593$, $R^2 = 0.352$, $p < 0.001$), thereby giving empirical support to the H2. It was also noted that the level of workforce diversity had a positive and significant direct influence on the employees' performance of the IT/ITES firms in Karnataka ($\beta = 0.382$, $R^2 = 0.146$, $p < 0.001$), thus giving support to the H3.

The results also revealed that there was a significant mediation effect of digital capability on the relation between workforce diversity and the employees' performance. The indirect effect was found to be significant ($\beta = 0.215$, $R^2 = 0.2030$; 95% CI: 0.108–0.338), with a large direct effect ($R^2 = 0.203$, $R^2 = 0.2032$). Thus, it can be stated that H4 was

partially supported. The results provided evidence that workforce diversity can lead to higher levels of employee performance both directly and indirectly by improving the former's digital capabilities.

7. MANAGERIAL IMPLICATIONS

The results of the research indicate that IT/ITES managers should consider diversity as a competitive advantage and establish an empowering environment in which employees of different ages, genders, and educational backgrounds can perform high-quality work. The workers' digital capability has to be supported through continuous training, education, and application of acquired competencies in day-to-day operations. Additionally, managers should facilitate the creation of networks and partnerships between workers with diverse backgrounds to increase their ability to learn from each other. Since the analysis revealed that digital capability partly mediates the relationship between workforce diversity and employee performance, it may be possible to benefit from combining proper managerial strategies and digital upskilling to ensure the industry's sustainable growth and ability to adapt to new circumstances.

8. LIMITATIONS AND FUTURE RESEARCH

The study is limited to 130 employees from IT/ITES organisations in Karnataka and uses a cross-sectional design, which restricts broader generalization and causal interpretation. Future studies could use larger, longitudinal and multi-state samples to validate the findings. Comparative studies across industries and regions could also be conducted to explore the additional dimensions of workforce diversity and digital capability.

9. CONCLUSION

The study concludes that workforce diversity is an important factor influencing digital capability and employee performance among employees of IT/ITES organisations in Karnataka. The findings demonstrate that workforce diversity positively contributes to digital capability, while digital capability has a stronger positive influence on employee performance. The study also confirms that workforce diversity directly contributes to employee performance. Significantly, digital capability partially mediates the relationship between workforce diversity and employee performance, indicating that the benefits of a diverse workforce can be strengthened through employees' ability to effectively use and adapt to digital technologies. Finally, the findings highlighted the importance of integrating diversity management with digital capability development. IT/ITES organisations can enhance employee performance by creating an inclusive work environment while simultaneously investing in digital skills, technological adaptability and effective digital work practices.

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