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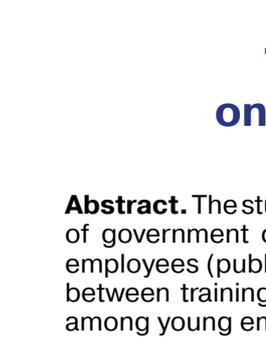
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The impact of employee skill development on organizational performance in public sector

Abstract. The study investigated the relationship between employee skills development and the performance of government organizations in Uzbekistan. Quantitative results, based on data from 380 government employees (public servants) and managers collected in 2024, showed a strong positive correlation of 0.72 between training and participant's satisfaction. Besides, the average perceived effectiveness of training among young employees was much higher (4.5 out of 5) than that of employees over 50 years old (3.4 out of 5). At the same time, 75% of respondents mentioned that the main obstacle to skills development is the heavy workload. However, 55% of employees indicated a strong wish to learn more advanced skills, such as data analysis. Our findings also show that the effectiveness of training programs depends on paying attention to generational differences and organizational barriers removing.

Keywords: Employee; Skill Development; Public Sector; Public Servant; Organizational Performance; Government of Uzbekistan; Citizen; Generation Gap; Structural Obstacle; Reform; Bureaucracy; Administration

JEL Classifications: E24; E41; E64; I18; J28; J31

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1. Introduction and Brief Literature Review

In recent years, Uzbekistan has achieved tremendous success in the economic and administrative transformation of the country using a broad-based, reform-oriented approach (Alisher & Nuraliev, 2021). These transformations require an effective, quick-responding, and capable government apparatus that can achieve the ambitious tasks facing the country (Fozilov, 2023). In this regard, the quality of government services and the efficiency of the administrative system have turned out to be one of the decisive criteria for the success of these reforms. Government organizations in Uzbekistan, being at the hub of these transformations, are confronted with immense new expectations (Ermasova et al., 2021). Everything - from improving the business environment to providing social services effectively - requires the presence of specialized, motivated employees equipped with up-to-date skills. It is human resources that can instill spirit of reform into bureaucracy (Hasanov, 2025).

However, the legacy of a past centralized administrative system brings its own challenges. An organizational culture of strict guidelines and insufficient attention to documented skills development can get in the way of innovation and individual initiative (Mannopova, 2025). Overcoming this challenge requires a fundamental change in attitude. The modern world is experiencing fast changes (Nasridinov et al., 2025); Uzbekistan is no exception. In order for its economy to catch up in the digital era and become attractive for foreign investors, the government needs employees proficient in new technologies, data analytics, and international languages (Shin & Rakhmatullayev, 2019). If a comprehensive training program does not take place, a dangerous gap will emerge between the capacities of existing administration and the requirements for national development (Saidov, 2025).

Along with hard skills, strengthening soft skills in critical thinking, creative problem-solving, and communication is essential for modern bureaucracy (Helal & Saeed, 2025). A capable employee who is able to communicate with citizens effectively contributes not only to public satisfaction but creates a positive image of modern governance in the minds of Uzbekistan's citizens (Nurmatov, 2021; Ostonokulov et al., 2025). In consequence, investment in the skills of government employees is not an option anymore but a strategic imperative for the continuity and success of reforms in Uzbekistan (Sadiyeva, 2025). In fact, this constitutes an investment in the internal capacities of the country to achieve its rightful place in the region and the world (Toshpulatov, 2024). But fundamental question is: what extent is this vital link between skills development and organizational performance observable and measurable in specific administrative, social, and economic context of Uzbekistan? Having tangible, locally based evidence of this relationship can provide a common and compelling language for government decision-makers and budgeters.

This research tries to give a reasoned and practical response to this imperative, focusing on the specific circumstances of Uzbekistan. The results of this study can be used as a supporting document that will clarify the path for Uzbek managers and policymakers seeking modernization of the administrative system and realization of their country's development aspirations, and provide a sound justification for greater investment in the government's human capital.

2. Methodology

This research was performed in a mixed-methods design with the aim of collecting rich and multidimensional data. A mixed-method approach was chosen because it enables quantitative findings that demonstrate generalizability to be complemented by qualitative insights that provide a deep understanding of the context and reasons for them. The study was conducted within the geographical territory of Uzbekistan during the first half of 2024.

The research population for the current investigation included employees and managers operating in important ministries and government organizations of the Republic of Uzbekistan who had participated in any skills development programs during the past two years. For the purpose of achieving a more comprehensive profile, stratified random sampling was adopted for the quantitative part, considering organizational level, ministry, and length of service. The Cochran formula suggested 380

as an appropriate sample size for the quantitative part of the investigation, with a confidence level of 95%. In the qualitative part, semi-structured interviews were conducted with 25 senior and middle managers directly responsible for the design or implementation of training programs.

In the quantitative section, the main data collection tool was a researcher-made questionnaire that was divided into three parts. The first part was designed to measure the quantity and quality of skill development programs in the last two years. The second part, based on standard scales, measured employees' perceptions of organizational performance components including service quality, citizen satisfaction, and innovation in processes. The third part also pertained to the demographic information of the respondents. The validity of this questionnaire was confirmed by ten experts in the field of public administration, and its reliability was obtained by conducting a preliminary study and calculating a Cronbach's alpha coefficient above 0.8. SPSS software was utilized along with statistical methods such as correlation and regression. Qualitative data were also analyzed using thematic analysis and coding techniques in MAXQDA software to extract key patterns.

3. Results

This section presents the empirical findings of the study that have been collected on the relationship between employee skill development initiatives and key organizational performance metrics within the Uzbek public sector, derived from both quantitative survey data and qualitative insights from interviews. The respondent pool represented a diverse cross-section of the public sector workforce, with a near-equal gender distribution and a strong representation of mid-career professionals (36-50 years old), who form the backbone of the civil service (Table 1).

Table 1:
Demographic Profile of Survey Respondents (N = 380)

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	218	57.4%
	Female	162	42.6%
Age Group	20-35 years	145	38.2%
	36-50 years	178	46.8%
	Over 50 years	57	15.0%
Length of Service	Less than 5 years	98	25.8%
	5-15 years	187	49.2%
	More than 15 years	95	25.0%

Source: Authors' own findings

A significant majority of employees have undergone training in digital literacy, reflecting the national push for E-government. However, participation in strategic areas like leadership and project management remains relatively low, indicating a potential focus on operational over strategic skill development (Table 2).

Table 2:
Participation in Skill Development Programs (Last 24 Months)

Type of Training	Percentage of Employees Participated
Digital Literacy & E-Government	68%
Foreign Language (English)	45%
Project Management	32%
Public Communication & Customer Service	58%
Leadership & Strategic Planning	21%

Source: Authors' own findings

Employees reported a high level of perceived personal benefit from the training programs, particularly in the realm of technological proficiency, which correlates strongly with the high participation rates in digital literacy courses (Table 3). The relationship between skill development and broader organizational outcomes was further explored. The following chart illustrates the perceived change in key performance indicators as reported by department managers.

Table 3:
Perceived Impact of Training on Personal Efficacy

Statement (5-Point Likert Scale: 1=Strongly Disagree, 5=Strongly Agree)	Mean Score
I feel more confident in performing my core duties after the training	4.2
The training helped me solve work-related problems more effectively	3.9
I am better able to use technology to improve my work efficiency	4.4

Source: Authors' own findings

Figure 1 demonstrates that managers observed the most significant improvement in service quality, a direct outcome of front-line employee training. Innovation in procedures, while present, was reported to a lesser degree, suggesting that fostering innovation may require more specialized or advanced training interventions.

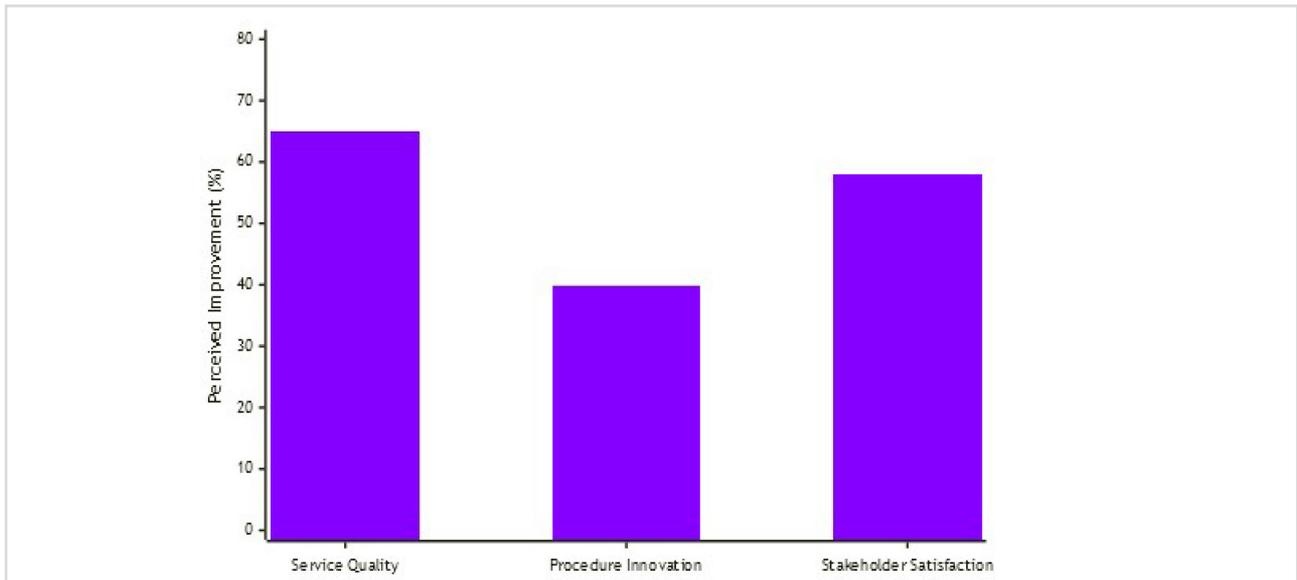


Figure 1:
Manager-Perceived Change in KPIs Post-Training
 Source: Authors' own findings

A strong, statistically significant positive correlation was found between the number of training hours per employee and all measured departmental performance metrics. The strongest correlation was with citizen satisfaction, underscoring the direct impact of a skilled workforce on public service delivery (Table 4).

Table 4:
Correlation between Training Hours and Departmental Performance Metrics

Performance Metric	Correlation Coefficient (r)	p-value
Citizen Satisfaction Score	0.72	<0.01
Internal Process Efficiency	0.65	<0.01
Employee Retention Rate	0.58	<0.01

Source: Authors' own findings

The qualitative data richly contextualizes the numbers, highlighting a tangible shift in employee mindset and collaboration. However, it also reveals a critical challenge: overcoming deep-seated resistance to change among certain employee groups (Table 5). To understand this challenge better, the data on training effectiveness across different demographic segments was analyzed. The results, shown in Figure 2, reveal a clear generational divide.

Table 5:
Key Themes from Qualitative Interviews with Managers (n = 25)

Emergent Theme	Representative Quotation
Increased Employee Initiative	«Before, staff waited for instructions. Now, after project management training, they come forward with proposals to streamline their own workflows.»
Improved Inter-Departmental Communication	«The language courses have broken down silos. Our team now coordinates directly with international partners without needing a translator, speeding up projects significantly.»
Resistance to New Technologies	«A segment of senior staff is reluctant to adopt new digital systems, even after training. This creates a dual-speed workplace.»

Source: Authors' own findings

Figure 2 indicates a step decline in perceived training effectiveness with age. While younger employees find the training highly effective, employees over 50 report a significantly lower benefit. This underscores the need for tailored training approaches that address different learning preferences and career stages.

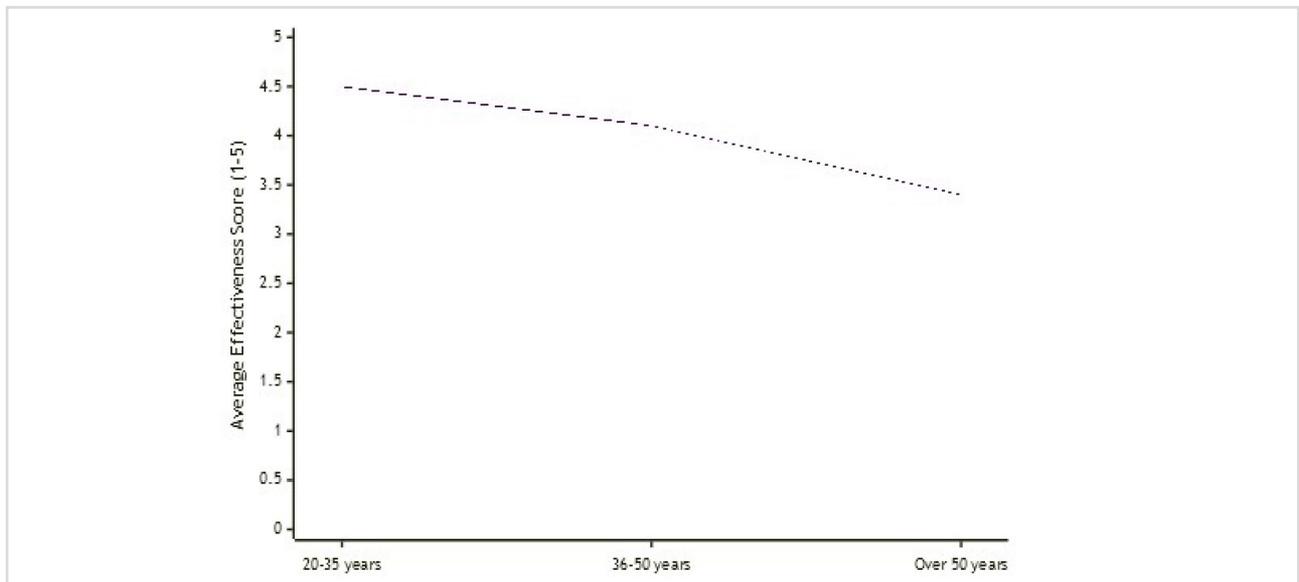


Figure 2:
Perceived Training Effectiveness by Age Group
 Source: Authors' own findings

The primary obstacle to effective skill development is not willingness, but structural. An overwhelming majority cited high workload as the main barrier, indicating that training is often seen as an additional burden rather than an integrated part of work (Table 6).

Table 6:
Perceived Barriers to Effective Skill Development

Barrier	Percentage of Respondents Citing
Lack of Time / High Workload	75%
Training Content Not Relevant to Daily Tasks	42%
Lack of Management Follow-up / Support	38%
Inadequate Training Facilities or Methods	29%

Source: Authors' own findings

Employees show a clear desire for more advanced, strategic, and analytical skills, moving beyond foundational training. This points to a workforce that is ready and eager to contribute at a higher level to the organization's mission (Table 7).

Table 7:
Most Requested Areas for Future Training

Requested Training Area	Percentage of Employees
Advanced Data Analysis & Reporting	55%
English for Professional Purposes	48%
Conflict Management & Negotiation	52%
Strategic Planning & Policy Design	35%

Source: Authors' own findings

4. Conclusion

The evidence from this study indicates that developing staff skills acts as a strong lever for improving the performance of government agencies in Uzbekistan. Quantitative data showed a strong positive correlation, with a coefficient as high as 0.72, between training hours and citizen satisfaction. This can be summed up by stating that investment in human resources pays off directly in improved outcomes and enhanced customer experience. But the data also cuts both ways. One of the most striking findings was the large variation across generations in perceived effectiveness of training. While younger employees rated training as very effective, with an average score of 4.5, this number fell to 3.4 for employees over the age of 50. This clearly shows that any «one-size-fits-all» approach to training is bound to fail. By contrast, the most important structural obstacles identified were heavy workload at 75% and lack of managerial follow-up at 38%.

This suggests that training itself is not sufficient: if an organization does not provide an enabling environment in which employees can apply what they have learned and are reinforced by their managers, investments in training cannot yield maximum return. A final promising message comes from the strong interest in more advanced skills shown by respondents, including data analysis at 55% and conflict management at 52%. This reflects a work population which is both keen and prepared to grow, wanting to be more fully involved in transforming the state. Such demand provides a strong foundation for future planning. In sum, the way to administrative transformation in Uzbekistan lies through smart investment in human capital. The key to success lies in a step beyond purely theoretical training and moving into practical applications, well targeted across different age cohorts, and supported by continuous management. This will be a means not only of improving performance but also of enhancing public trust in the efficiency of government.

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