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Artificial Intelligence and Project Management Performance Through Training in the UAE Public Sector

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Abstract

This study explores the ranking and interrelationships of artificial intelligence (AI) capabilities, training, and project management performance within the United Arab Emirates (UAE) public sector. Four AI capability dimensions which are predictive analytics, intelligent scheduling and automation, decision support systems, and risk management and resource allocation that were assessed using data from a structured questionnaire distributed to government and public-sector employees engaged in project-related activities. Of the 600 questionnaires distributed, 515 valid responses were retained for analysis. Findings reveal that all AI capability dimensions, training, and project management performance were perceived at moderate-to-high levels. Ranking analysis identified project management performance as the most influential factor, followed by risk management and resource allocation, training, decision support systems, intelligent scheduling and automation and predictive analytics. Correlation analysis further confirmed positive and significant associations among all study dimensions, with training showing the strongest relationship to project management performance. These results underscore the pivotal role of human capability development in maximizing AI-supported project outcomes. The study contributes to the literature on AI-enabled project management by highlighting the combined importance of technological capability and workforce training in enhancing project performance in the

UAE public-sector context.

Keywords: artificial intelligence, AI capabilities, project management performance, training, UAE public sector, digital transformation.

1. Introduction

Artificial intelligence (AI) has become a major driver of digital transformation, reshaping organisational processes, decision-making, and value creation across sectors (Bharadwaj et al., 2013; Mergel et al., 2019). In project management, AI-enabled capabilities such as predictive analytics, intelligent scheduling and automation, decision support systems, risk management, and resource allocation are increasingly used to enhance efficiency, improve forecasting accuracy, support evidence-based decisions, and optimise project delivery (Jarrahi, 2018; Hashfi & Raharjo, 2023; Nguyen & Tran, 2023). These capabilities are especially important in complex project environments, where successful performance depends on timely information, effective coordination, proactive risk management, and informed managerial decisions (APM, 2025; Project Management Institute, 2023).

In the United Arab Emirates (UAE) public sector, AI adoption is closely linked to national digital transformation priorities and the government's broader objective of improving public service delivery (Alzarooni et al., 2024; Anshari et al., 2025). Public-sector organisations in the UAE are increasingly expected to use digital and AI-enabled tools to strengthen governance, improve operational efficiency, enhance monitoring processes, and deliver projects more effectively (Akhoirshieda et al., 2024; Dahabreh, 2023). Within this context, AI has the potential to support project-related activities by improving prediction, automating routine tasks, enabling data-driven decision-making, and supporting the efficient allocation of resources.

However, the successful integration of AI into public-sector project management is not determined by technology alone. Although AI tools can enhance project planning, monitoring, and control, their effectiveness depends significantly on employees' ability to understand, interpret, and apply AI-generated insights in practical project settings. Public-sector organisations may face challenges such as bureaucratic structures, procedural complexity, legacy systems, and variations in employee readiness, all of which can limit the extent to which AI capabilities are translated into improved project performance (Abuzanjal & Bashir, 2024; Escobar et al., 2023). Therefore, workforce training becomes a critical factor in ensuring that AI technologies are used effectively and consistently.

Training plays a central role in strengthening human capability for AI-supported project management. It equips employees with the knowledge and skills required to interact with intelligent systems, interpret analytical outputs, apply AI-based recommendations, and integrate digital tools into project workflows. Without adequate training, AI capabilities may be underutilised, misinterpreted, or applied inconsistently, reducing their potential contribution to project outcomes (Dwivedi et al., 2021; Tan et al., 2024). This is particularly relevant in the UAE public sector, where large-scale projects require accuracy, accountability, coordination, and alignment with national strategic objectives (Ayyad et al., 2025).

Although existing studies have highlighted the growing importance of AI in project management, limited empirical attention has been given to the relative importance of different AI capability dimensions and their relationships with project management performance in the UAE public-sector context. In particular, there is a need to examine how

predictive analytics, intelligent scheduling and automation, decision support systems, risk management and resource allocation, and training are perceived by public-sector employees engaged in project-related activities. Understanding these rankings and interrelationships can help identify which factors are most strongly associated with improved project management performance.

Accordingly, this study explores the ranking and interrelationships of AI capabilities, training, and project management performance within the UAE public sector. Specifically, it examines four AI capability dimensions: predictive analytics, intelligent scheduling and automation, decision support systems, and risk management and resource allocation. It also assesses the role of training as a key human capability factor in AI-supported project environments. Based on questionnaire data collected from government and public-sector employees involved in project-related activities, the study identifies the perceived levels of these dimensions and examines their associations with project management performance.

By focusing on both technological capability and workforce training, this study contributes to the literature on AI-enabled project management in public-sector settings. It provides empirical insights into the factors that public organisations should prioritise when seeking to improve project outcomes through AI adoption. In doing so, the study highlights that the value of AI in project management depends not only on the availability of advanced technologies but also on the development of employee capabilities required to use these technologies effectively.

2. Literature Review

2.1 Artificial Intelligence in Project Management

Artificial Intelligence (AI) has progressed from rule-based systems to advanced data-driven and generative models capable of supporting complex organisational functions (Russell & Norvig, 2021; Kelvin et al., 2025). In project management, AI is increasingly viewed as a strategic enabler of digital transformation, particularly because of its ability to improve planning, decision-making, monitoring, and predictive analysis (Marnewick & Marnewick, 2020; Project Management Institute, 2024). Technologies such as machine learning, natural language processing, predictive analytics, and intelligent automation enable project teams to analyse large volumes of data, forecast project outcomes, identify risks, and optimise workflows (Jarrahi, 2018; Hashfi & Raharjo, 2023).

The relevance of AI is particularly evident in public-sector organisations, where governments are increasingly adopting digital technologies to improve service delivery, operational efficiency, transparency, and evidence-based decision-making (Mergel et al., 2019; Anshari et al., 2025). In the UAE, AI adoption is closely linked to national digital transformation agendas and has become an important mechanism for enhancing governance, institutional performance, and project execution (Akhoirshieda et al., 2024; Alzarooni et al., 2024). However, the successful use of AI in project management is not automatic. Its implementation is shaped by organisational readiness, technical infrastructure, employee capabilities, data quality, and acceptance of AI-enabled work practices (Dacre & Kockum,

2022; Escobar et al., 2023). Therefore, understanding how AI contributes to project management performance requires attention not only to technological capabilities, but also to the human and organisational conditions that enable their effective use.

2.2 AI Capabilities and Project Management Performance

AI capabilities refer to an organisation's ability to deploy, integrate, and utilise AI-based technologies to support operational processes and managerial decision-making (Nguyen & Tran, 2023). In project management, these capabilities are commonly reflected in predictive analytics, intelligent scheduling and automation, decision support systems, and AI-enabled risk management and resource allocation.

Predictive analytics supports project planning by enabling organisations to anticipate delays, estimate project outcomes, and improve forecasting accuracy (Hashfi & Raharjo, 2023). Intelligent scheduling and automation improve efficiency by reducing manual tasks, optimising task allocation, and supporting real-time project coordination (Alqahtani et al., 2021). AI-based decision support systems provide managers with data-driven insights, allowing them to make more informed decisions in complex and uncertain project environments (Smith & Lee, 2023; Waqar, 2024). Similarly, AI-enabled risk management and resource allocation help organisations identify potential risks earlier and distribute financial, human, and technical resources more effectively (Nabeel, 2024).

These capabilities are expected to enhance project management performance by improving efficiency, timeliness, cost control, risk response, and overall project success (APM, 2025). Prior studies suggest that organisations with stronger AI capabilities are more likely to achieve improved project outcomes because AI strengthens data utilisation, decision accuracy, and process optimisation (Nguyen & Tran, 2023). However, the impact of AI capabilities depends on the extent to which they are embedded into project workflows and actively used by employees. This indicates that AI capability alone may be insufficient unless supported by appropriate organisational practices and employee competencies.

2.3 Training as an Enabler of AI Utilisation

Training is a critical mechanism through which organisations develop the knowledge, skills, and competencies required to use new technologies effectively. From a human capital perspective, training enhances employee capability and contributes to improved organisational performance by strengthening technical proficiency, problem-solving ability, and confidence in work-related tasks (Noe, 2020; Fugar et al., 2013). In AI-enabled environments, training is particularly important because employees must be able to understand AI outputs, interpret data-driven recommendations, and apply insights appropriately within organisational decision-making processes (Faraj et al., 2018).

Previous research indicates that training significantly affects employees' readiness and ability to adopt AI technologies (Nguyen et al., 2022). Without sufficient training, employees may resist AI implementation, underuse available systems, or rely on AI outputs without adequate understanding, all of which may reduce the value generated from AI investments (Dwivedi et al., 2021). This issue is especially relevant in public-sector organisations, where bureaucratic

structures, formal procedures, and slower adaptation to technological change may create additional barriers to AI adoption (Al-Shboul, 2024).

In the UAE public-sector context, training is central to closing competency gaps and supporting digital transformation initiatives (Ayyad et al., 2025). Effective AI training not only improves technical knowledge but also strengthens employee readiness, trust, and confidence in using AI-enabled systems. As a result, training can be understood as a key organisational enabler that helps translate AI capabilities into practical use within project management activities.

2.4 Training and Project Management Performance

Training has long been recognised as an important determinant of organisational and project performance. By improving employee knowledge, skills, and behavioural competencies, training enhances productivity, coordination, decision-making quality, and responsiveness to project challenges (Noe, 2020). In project management, trained employees are better positioned to manage complexity, communicate effectively, solve problems, and respond to uncertainty, all of which are essential for achieving project objectives (APM, 2025).

Empirical evidence suggests that training contributes positively to project performance by improving team coordination, communication, technical competence, and problem-solving capacity (Tan et al., 2024). These benefits become even more important in AI-enabled project environments, where employees are required to integrate technological tools into planning, monitoring, risk assessment, and decision-making processes. Training therefore strengthens the ability of project teams to use AI effectively rather than treating AI as a standalone technological resource.

Accordingly, organisations that invest in continuous and targeted AI-related training are more likely to improve project management performance. Training enables employees to convert AI-generated insights into actionable decisions, align AI tools with project objectives, and reduce uncertainty associated with technology adoption. This suggests that training may play both a direct role in improving project performance and an enabling role in strengthening the relationship between AI capabilities and project outcomes.

3. Data Collection and Respondent Profile

3.1 Population and Sampling

The target population comprised employees working in UAE government ministries and public-sector entities who were involved in project-related activities or supported AI-enabled and digital project systems. Respondents included project managers, PMO staff, project coordinators, IT and AI specialists, and supervisory or governance-level employees involved in project performance and decision-making.

A multi-stage stratified sampling approach was adopted to ensure representation across relevant functional groups. Ministries and public-sector entities with active project portfolios and ongoing digital or AI initiatives were first approached through formal access procedures. Within these organisations, respondents were grouped into role-based strata, including project

leadership, project delivery, digital or AI support, and supervisory or governance roles. Where staff lists were available, respondents were selected using random or systematic procedures. Where access to complete staff lists was restricted, questionnaire invitations were distributed through HR or PMO channels using quota-guided stratification.

This approach was considered appropriate for the UAE public-sector context, where access limitations may restrict the use of strict probability sampling. Stratification also helped reduce the risk of overrepresenting a single respondent group and ensured that the sample reflected the technical, managerial, and governance perspectives relevant to AI-enabled project management.

3.2 Questionnaire Distribution and Usable Responses

A total of 600 questionnaires were distributed to eligible employees in the UAE public sector. Of these, 549 were returned, yielding a response rate of 91.5%. After reviewing the returned questionnaires, 21 incomplete responses were excluded, leaving 528 complete questionnaires for further screening. The completeness rate was 96.2% of returned questionnaires and 88.0% of all distributed questionnaires. The complete responses were then screened for outliers. Thirteen cases were removed because they showed extreme response patterns that could potentially distort the analysis. The final dataset therefore consisted of 515 usable responses, representing 85.8% of the distributed questionnaires and 93.8% of the returned questionnaires.

Table 1. Questionnaire distribution and data screening summary

Description	Frequency	Percentage
Questionnaires distributed	600	100.0%
Questionnaires returned	549	91.5%
Incomplete questionnaires removed	21	3.5%
Complete questionnaires retained for outlier screening	528	88.0%
Outliers removed	13	2.2%
Final usable questionnaires	515	85.8%

The low reduction from returned questionnaires to usable responses indicates limited case loss during screening and supports the adequacy of the final dataset for the main statistical analysis.

3.3 Respondent Profile

Table 2 presents the demographic and professional profile of the 515 respondents. The sample was relatively balanced by gender, with male respondents representing 53.0% and female respondents representing 43.7%; a further 3.3% preferred not to disclose their gender. In terms of age, the largest group was 30–39 years old, accounting for 44.3% of the sample, followed by respondents aged 40–49 years at 28.9%. This indicates that the sample was

largely composed of early- to mid-career professionals who are likely to be actively involved in project delivery, coordination, and digital transformation activities.

Table 2. Demographic and professional profile of respondents (N = 515)

Variable	Category	Frequency	Percentage
Gender	Male	273	53.0
	Female	225	43.7
	Prefer not to say	17	3.3
Age	Under 30	79	15.3
	30–39	228	44.3
	40–49	149	28.9
	50 and above	59	11.5
Job Role	Project Manager	108	21.0
	Project Coordinator	103	20.0
	PMO Staff	86	16.7
	IT/AI Specialist	81	15.7
	Senior/Line Manager	102	19.8
	Other	35	6.8
Years of Work Experience	Less than 5	112	21.7
	5–10	146	28.3
	11–15	127	24.7
	More than 15	130	25.2
Years of Project	Less than 3	95	18.4
Management Experience	3–7	194	37.7
	8–12	128	24.9
	More than 12	98	19.0
AI Exposure in Current	Direct and frequent use	170	33.0
Role	Occasional use	192	37.3
	Indirect/support role only	123	23.9
	None	30	5.8
AI Training Received	None	41	8.0
	Basic awareness/introductory	150	29.1
	Intermediate/hands-on	209	40.6
	Advanced/continuous professional development	115	22.3
Highest Level of Education	Diploma	46	8.9
	Bachelor's	238	46.2
	Master's	177	34.4
	Doctorate	33	6.4
	Other	21	4.1
Organisation Type	Federal Government	289	56.1
	Local Government	104	20.2
	Semi-Government	122	23.7

The job role distribution confirms the relevance of the sample to the study context. Project managers accounted for 21.0% of respondents, followed by project coordinators at 20.0%, senior or line managers at 19.8%, PMO staff at 16.7%, and IT or AI specialists at 15.7%. This distribution captures both managerial and technical perspectives, which is important for examining AI capability, training, and project management performance.

Respondents also reported substantial professional and project management experience. More than three-quarters of the sample had at least five years of overall work experience, while 81.6% had three or more years of project management experience. This suggests that most respondents had sufficient organisational and project-related exposure to provide informed responses.

The AI-related profile further supports the suitability of the sample. Most respondents reported some level of AI exposure in their current role, with 33.0% indicating direct and frequent use, 37.3% indicating occasional use, and 23.9% reporting indirect or support-related involvement. Only 5.8% reported no AI exposure. Similarly, most respondents had received some form of AI-related training: 40.6% reported intermediate or hands-on training, 29.1% basic awareness training, and 22.3% advanced or continuous professional development. These patterns are consistent with the study's focus on AI-enabled project management and support the examination of training as a mediating mechanism.

The educational profile shows that the sample was largely composed of professionally qualified respondents, with bachelor's degree holders representing 46.2% and master's degree holders representing 34.4%. In terms of organisational affiliation, 56.1% of respondents were from federal government entities, 23.7% from semi-government organisations, and 20.2% from local government entities. Although the federal sector was more strongly represented, the sample still included respondents from different public-sector settings.

Overall, the respondent profile indicates that the final sample was appropriate for the study. Participants were drawn from roles directly related to project management, AI support, governance, and organisational decision-making. The majority also had relevant professional experience, AI exposure, and AI-related training, providing a suitable empirical basis for testing the proposed relationships among AI capability, training, and project management performance in the UAE public sector.

4. Results and Analysis

This section presents the empirical results of the study. Descriptive statistics were first used to examine the relative standing of the main Dimensions based on mean scores and standard deviations, which is a common approach for summarising respondents' perceptions in quantitative survey research (Pallant, 2020; Sekaran & Bougie, 2019). Pearson correlation analysis was then conducted to assess the strength and direction of the relationships among artificial intelligence capabilities, training, and project management performance. Correlation analysis is appropriate at this stage because it provides an initial indication of whether the Dimensions are statistically associated before proceeding to more advanced model testing

(Tabachnick & Fidell, 2019; Hair et al., 2022).

4.1 Ranking of the Dimensions

Descriptive statistics were calculated to determine respondents' perceptions of the study Dimensions. The Dimensions were ranked according to their mean scores, with higher mean values indicating stronger levels of agreement or higher perceived presence of the Dimension.

Table 3. Ranking of the dimensions

Dimensions	Mean	Standard Deviation	Rank
Project Management Performance	3.559	1.037	1
Risk Management and Resource Allocation	3.558	1.035	2
Training	3.536	1.027	3
Decision Support Systems	3.517	1.034	4
Intelligent Scheduling and Automation	3.508	1.000	5
Predictive Analytics	3.486	1.046	6

As shown in Table 3, **Project Management Performance** recorded the highest mean score (M = 3.559, SD = 1.037), suggesting that respondents generally perceived project management outcomes positively. This finding is consistent with the view that project management performance is reflected through efficiency, timeliness, cost control, risk responsiveness, and the achievement of project objectives (APM, 2025; Bredillet, 2019).

Risk Management and Resource Allocation ranked second (M = 3.558, SD = 1.035). This result suggests that respondents viewed AI-supported risk and resource practices as relatively prominent in their project environments. Prior studies have emphasized that AI can strengthen project control by supporting early risk identification, resource optimisation, and more informed allocation decisions (Nabeel, 2024; Tukamuhabwa et al., 2023).

Training ranked third (M = 3.536, SD = 1.027), indicating that respondents perceived training as an important element in AI-enabled project management. This aligns with human capital theory, which argues that training improves employees' knowledge, skills, and competencies, thereby strengthening organisational and project outcomes (Fugar et al., 2013; Noe, 2020). In AI-based work environments, training is particularly important because employees must be able to interpret AI-generated insights and apply them appropriately in decision-making processes (Faraj et al., 2018; Nguyen et al., 2022).

The remaining AI capability dimensions also recorded moderate-to-high mean values. **Decision Support Systems** ranked fourth (M = 3.517, SD = 1.034), followed by **Intelligent Scheduling and Automation** (M = 3.508, SD = 1.000). **Predictive Analytics** recorded the lowest mean score (M = 3.486, SD = 1.046), although the difference between the highest and lowest ranked Dimensions was small. These results suggest that respondents recognised the

relevance of different AI capabilities in project management, including forecasting, scheduling, automation, decision support, and risk management (Hashfi & Raharjo, 2023; Nguyen & Tran, 2023; Waqar, 2024).

Overall, the mean scores ranged from 3.486 to 3.559, indicating that all Dimensions were perceived at a broadly moderate-to-high level. The narrow range of mean values suggests that no Dimensionwas substantially weaker than the others. The standard deviations, ranging from 1.000 to 1.046, also indicate a relatively consistent spread of responses across the Dimensions, which supports the stability of the descriptive results (Pallant, 2020).

4.2 Correlations Among the Dimensions

Pearson correlation analysis was conducted to examine the relationships among the AI capability dimensions, training, and project management performance. Pearson correlation is commonly used in quantitative research to assess the direction and strength of linear relationships between continuous variables (Pallant, 2020; Tabachnick & Fidell, 2019).

Table 4. Pearson correlations among the dimensions

Dimension	Code	PA	ISA	DSS	RMRA	TR	PMP
Predictive Analytics	**PA**	1.000					
Intelligent Scheduling and Automation	**ISA**	0.475**	1.000				
Decision Support Systems	**DSS**	0.384**	0.376**	1.000			
Risk Management and Resource Allocation	**RMRA**	0.449**	0.465**	0.425**	1.000		
Training	**TR**	0.535**	0.547**	0.487**	0.562**	1.000	
Project Management Performance	**PMP**	0.535**	0.539**	0.508**	0.511**	0.662**	1.000

Note. **p < 0.01.

The results in Table 4 show that all Dimensions were positively and significantly correlated at the 0.01 level. This indicates that higher levels of AI capabilities and training are associated with higher levels of project management performance. These findings are consistent with prior studies suggesting that AI capabilities enhance organisational and project outcomes by improving data utilisation, decision quality, automation, and predictive accuracy (Marnewick & Marnewick, 2020; Hashfi & Raharjo, 2023; Nguyen & Tran, 2023).

The strongest correlation was observed between **Training** and **Project Management Performance** ($r = 0.662$, $p < 0.01$). This suggests that training has a particularly important association with project outcomes. The result supports previous research indicating that training strengthens employee competence, confidence, coordination, and problem-solving capacity, all of which are essential for effective project delivery (Noe, 2020; Tan et al., 2024). In AI-enabled settings, training is also important because employees need the skills to understand, trust, and apply AI-generated recommendations effectively (Dwivedi et al., 2021; Nguyen et al., 2022).

Training was also positively correlated with all four AI capability dimensions. Its strongest association was with **Risk Management and Resource Allocation** ($r = 0.562$, $p < 0.01$), followed by **Intelligent Scheduling and Automation** ($r = 0.547$, $p < 0.01$), **Predictive Analytics** ($r = 0.535$, $p < 0.01$), and **Decision Support Systems** ($r = 0.487$, $p < 0.01$). These results suggest that training may help employees use AI tools more effectively across different project management functions. This is consistent with the argument that AI implementation depends not only on technological availability, but also on employee readiness and capability (Faraj et al., 2018; Al-Shboul, 2024; Ayyad et al., 2025).

Project Management Performance was positively correlated with all AI capability dimensions: **Predictive Analytics** ($r = 0.535$, $p < 0.01$), **Intelligent Scheduling and Automation** ($r = 0.539$, $p < 0.01$), **Decision Support Systems** ($r = 0.508$, $p < 0.01$), and **Risk Management and Resource Allocation** ($r = 0.511$, $p < 0.01$). These findings indicate that AI capabilities are associated with improved project outcomes. Predictive analytics can support forecasting and planning accuracy, intelligent scheduling can enhance workflow efficiency, decision support systems can improve managerial judgment, and AI-enabled risk and resource management can strengthen project control (Jarrahi, 2018; Alqahtani et al., 2021; Nabeel, 2024; Waqar, 2024).

The correlations among the AI capability dimensions were moderate, ranging from 0.376 to 0.475. The strongest relationship among these dimensions was between **Predictive Analytics** and **Intelligent Scheduling and Automation** ($r = 0.475$, $p < 0.01$), suggesting that forecasting capability may support more effective scheduling and automation. The weakest relationship was between **Intelligent Scheduling and Automation** and **Decision Support Systems** ($r = 0.376$, $p < 0.01$), although the association remained positive and statistically significant.

Overall, the correlation results provide initial empirical support for the relationships among AI capabilities, training, and project management performance. The correlation coefficients remained below the commonly accepted threshold of 0.80, suggesting that multicollinearity was not a serious concern and that the Dimensions were sufficiently distinct for further analysis (Kline, 2016; Tabachnick & Fidell, 2019). However, because correlation analysis does not establish causality, these results should be interpreted as evidence of association rather than direct causal effects (Levin, 2006; Pallant, 2020).

4.3 Discussion of the Results

The findings provide evidence that both AI capabilities and training are important in explaining project management performance. The descriptive results show that all Dimensions were rated at moderate-to-high levels, with Project Management Performance, Risk Management and Resource Allocation, and Training receiving the highest rankings. This suggests that respondents perceived AI-supported project practices and employee capability development as relevant to project outcomes in the UAE public-sector context.

The relatively high ranking of **Risk Management and Resource Allocation** is meaningful because public-sector projects often involve complex governance requirements, stakeholder

expectations, budget constraints, and implementation risks. AI-enabled risk and resource management can help organisations anticipate potential disruptions, allocate resources more effectively, and improve project control (Nabeel, 2024; Tukamuhabwa et al., 2023). This finding is also consistent with the broader view that digital transformation in the public sector requires stronger analytical and decision-support capabilities to improve institutional performance (Mergel et al., 2019; Escobar et al., 2023; Alzarooni et al., 2024).

The strong positive relationship between **Training** and **Project Management Performance** highlights the importance of human capability in AI-enabled project environments. Although AI systems can support forecasting, scheduling, automation, and decision-making, their effectiveness depends on whether employees have the knowledge and confidence to use them appropriately. This supports prior research suggesting that training enhances employee readiness for technology adoption and improves the organisational value derived from AI implementation (Dwivedi et al., 2021; Nguyen et al., 2022; Al-Shboul, 2024).

The positive correlations between AI capability dimensions and Project Management Performance further indicate that AI contributes to project outcomes when it is embedded into core project management processes. Predictive analytics supports more accurate planning, intelligent scheduling and automation improve efficiency, decision support systems strengthen managerial decisions, and AI-enabled risk and resource management enhances control over project uncertainties (Hashfi & Raharjo, 2023; Nguyen & Tran, 2023; Waqar, 2024). These results are consistent with the growing literature that positions AI as a strategic capability for improving project management practices and digital transformation outcomes (Marnewick & Marnewick, 2020; Project Management Institute, 2024).

The findings also suggest that AI capability alone may not be sufficient to improve project performance. The strongest association in the study was between training and project management performance, indicating that employee development may be a key mechanism through which AI capabilities are translated into practical project outcomes. This is particularly relevant in the UAE public sector, where digital transformation and AI adoption are strategic priorities, but successful implementation depends on organisational readiness, employee competence, and continuous professional development (Akhoirshieda et al., 2024; Ayyad et al., 2025; Sarker et al., 2023).

Taken together, the results indicate that AI-enabled project management should be understood as both a technological and human-capability issue. Public-sector organisations should therefore combine investment in AI tools with structured training programmes that develop employees' ability to interpret AI outputs, integrate AI into project workflows, and apply AI-generated insights to project decisions (Hair et al., 2022; Hayes, 2022; Ringle et al., 2023).

5. Conclusion

This study examined artificial intelligence capabilities, training, and project management performance in the UAE public sector using descriptive statistics and correlation analysis. The findings show that all study dimensions were perceived at moderate-to-high levels,

indicating that respondents generally recognised the relevance of AI-enabled practices and training in public-sector project management.

Among the dimensions examined, project management performance recorded the highest mean score, followed closely by risk management and resource allocation and training. This suggests that respondents perceived project outcomes, AI-supported risk and resource practices, and employee capability development as important features of the current project management environment. Predictive analytics recorded the lowest mean score, although the difference across dimensions was small, indicating that all AI capability areas were viewed as relatively relevant.

The correlation results showed positive and significant associations among AI capabilities, training, and project management performance. Training had the strongest relationship with project management performance, suggesting that employee development is closely linked to perceived project outcomes. The AI capability dimensions were also positively associated with project management performance, indicating that predictive analytics, intelligent scheduling and automation, decision support systems, and risk management and resource allocation are all relevant to project management practices in the UAE public sector.

Overall, the findings indicate that AI-enabled project management in the UAE public sector should be understood as both a technological and human-capability issue. While AI tools can support planning, scheduling, decision-making, risk management, and resource allocation, their value depends partly on employees' ability to use these tools effectively. Therefore, public-sector organisations should continue strengthening AI-related training while improving the integration of AI capabilities into project management processes.

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