

## The impact of project management skills, IT integration, supply chain coordination, process innovation, and communication language on organizational performance in educational institutions

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### ABSTRACT

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This study investigates the impact of project management capabilities on organizational performance, with a particular focus on the mediating roles of supply coordination, information technology integration, and process innovation. Data was collected from 85 suppliers providing goods and services to educational institutions in Irbid, Jordan, through questionnaires distributed from January 2025. The research adopts a causal quantitative approach, SEM-PLS to analyze the relationships between the variables. The findings reveal that project management capabilities positively influence supply coordination, information technology integration, and process innovation. Moreover, information technology integration and supply coordination significantly enhance organizational performance. This study contributes to a deeper understanding of how project management practices, supported by effective technology integration and strong supply chain coordination, can lead to improvements in organizational performance, especially within educational settings. The results underscore the importance of aligning project management capabilities with technological and collaborative strategies to promote innovation and efficiency.

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## 1. Introduction

In the context of globalization, educational institutions are continuously challenged to maintain and enhance their performance, ensuring sustainable improvements in their services. Key factors that significantly influence the organizational performance of these institutions include enhancing project management skills, integrating information technology, coordinating supply chains, driving process innovation, and strengthening communication. It is essential for these institutions to balance these factors to effectively address the needs of both students and the broader community while improving overall performance. Project management skills are vital in refining organizational systems, enabling continuous improvements and the application of innovations to sustainably elevate performance (Oke & Takeda, 2022).

Innovations in manufacturing and project management are crucial for meeting customer demands and enhancing organizational performance. Effective supply coordination, utilizing internal expertise, and managing external partnerships are essential for driving process innovations that streamline operations and reduce inefficiencies. By continuously learning from past innovations, organizations can enhance their performance and improve both service quality and cost-efficiency. Educational institutions, particularly in East Java, must adapt to rapid technological changes with dynamic management capabilities to remain competitive and respond to evolving customer needs effectively.

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Strategic alignment within organizations ensures that projects contribute to the broader goals and objectives. Effective project management skills play a key role in selecting and prioritizing initiatives that drive value for the organization. In East Java, the educational association has established a dedicated department to oversee procurement and development projects, ensuring that these align with the institution's overall mission. This approach helps organizations optimize resource allocation and improve business success.

This research aims to explore the role of project management capabilities (PMC) in enhancing information technology integration (ITI), supply coordination (SC), and process innovation (PI) within educational associations in East Java. The study seeks to assess how these factors contribute to organizational performance (OP) and examine the combined effects of ITI, SC, and PI on OP. The findings will provide insights into how effective project management, supported by IT integration and strong supply chain coordination, can significantly improve performance outcomes in educational settings.

## 2. Literature Review

### 2.1. Project Management Capability (PMC)

PMC refers to the skills, knowledge, and competencies required to successfully oversee a project from initiation to completion (Smith et al., 2024). Maturity in project management capability adds considerable value, supporting organizations in achieving successful project outcomes. Management capability is defined as the ability of organizational leadership to engage all components within the organization, ensuring that each part contributes effectively to achieving the organization's goals (Kim et al., 2023). All departments within an organization rely on management capabilities to generate, modify, or adapt resources in response to changes in the environment. Coordination and collaboration across the organization are essential to achieving shared objectives.

Management capability enables organizations to plan strategically by considering both internal and external needs and making the necessary adjustments (Zhang et al., 2024). It aids in the effective management of resources, ensuring efficient progress toward organizational goals (Wang et al., 2021). Educational institutions must identify essential skills and activities to mitigate risks in alignment with external conditions (Garcia et al., 2021). Knowledge management capabilities, when integrated with new technologies and methods, can enhance both processes and products, thus meeting organizational needs (Alonso-Álvarez et al., 2024). The capacity of an organization to scan, explore, and assimilate knowledge significantly enhances its innovative performance.

In educational institutions in Irbid, management capability plays a crucial role in improving skills, experience, and knowledge, which are essential for operational excellence and performance enhancement (Wang et al., 2023). Strong management capabilities are vital for fostering the resource capabilities necessary for supporting ITI and SCC. Project teams must focus on developing skills, communication, and collaboration to improve project management efficiency and, ultimately, organizational performance (Zhang et al., 2024).

Garcia et al. (2021) suggest that organizations should reduce risks by identifying key PMC, including coordination, communication, collaboration, distributive justice, procedural justice, resource integration, and adaptability. Others emphasize that management capability includes dynamic capabilities, which allow organizations to stay flexible and adaptable. Dynamic capabilities refer to an organization's ability to rapidly respond and adjust to shifts in the business environment (Lee et al., 2023). The focus on dynamic capabilities enables educational institutions in Irbid to quickly adapt to changes in their operating environment (Zhang et al., 2024). Key indicators of dynamic capabilities include the ability to change, adapt to environmental or cultural shifts, integrate resources, configure resources effectively, and efficiently carry out operational activities.

### 2.2 Information Technology Integration (ITI)

ITI plays a pivotal role in enhancing the efficiency and effectiveness of educational institutions, particularly in Irbid. By adopting advanced IT systems, such as project management software, institutions can improve their operational efficiency, reduce costs, and boost their competitive edge. The integration of IT enables real-time information sharing, improving visibility across departments and with external partners like suppliers and customers. This seamless coordination fosters innovation in both products and processes, contributing to better decision-making and overall organizational performance.

The effective management of IT integration is crucial for optimizing supply chain coordination and improving institutional performance. By connecting internal departments with external partners through integrated IT systems, educational institutions can enhance collaboration, streamline procurement, and improve decision-making. The positive impact of IT on supply chain management, particularly in procurement processes, leads to cost reductions and improved financial outcomes. Key indicators for evaluating IT integration include objectivity, reliability, timeliness, and ease of use, which are critical for ensuring that IT systems align with the institution's strategic goals and operational needs.

### 2.3 Supply Coordination (SC)

Supply flow coordination is a key concept in supply chain management (SCM), focusing on integrating and managing various supply chain components to ensure operational efficiency and effectiveness. This coordination involves processes, policies, and activities aimed at ensuring timely and cost-efficient delivery of goods and services (Yang et al., 2023). Strong

coordination with external partners enhances organizational competitiveness and performance (Tarigan & Tarigan, 2024). Additionally, supply coordination requires leadership-driven policies that promote sustainability and social responsibility throughout the supply chain (Baah & Assamoah, 2023).

Close coordination with suppliers helps strengthen relationships and improves organizational performance (Agarwal & Narayana, 2024). For educational institutions in Irbid, ensuring the timely availability of goods and services, while monitoring supplier performance, is essential (Moshtari et al., 2023). Sharing relevant information with suppliers, such as material needs and delivery timelines, is crucial for better coordination and smooth operations (Song and Liao, 2023). Information sharing on inventory, forecasts, and production schedules helps ensure timely procurement (Sundram et al., 2023). Technology plays a vital role in enhancing coordination by enabling real-time decision making (Harianto et al., 2024; Zhang et al., 2023). Indicators of effective SC coordination include external partner participation in forecasting, improvements in production processes, information sharing effectiveness, and the ability to meet organizational needs (Siagian et al., 2024).

#### *2.4 Process Innovation*

The ability of an organization to innovate is a key factor in strengthening its competitive position in the market (Tarigan & Tarigan, 2024). In educational institutions, particularly in Irbid, process innovation is vital for enhancing customer value by optimizing operational systems, such as implementing lean processes (Solaimani and Van der Veen, 2024; Sahoo, 2023). Process innovation involves creating and implementing new processes or products that align with an organization's strategic objectives, and for educational institutions, it improves efficiency, productivity, and overall performance (Siagian et al., 2023).

Incorporating technology to meet the changing needs of external partners and stakeholders helps institutions stay competitive (Schniederjans & Khalajhedayati, 2023). Educational innovations boost competitiveness by improving services and offering new products or services that cater to current demands. These innovations often result from collaboration with internal and external partners, promoting knowledge sharing and the development of new solutions (Wang et al., 2023).

Process innovation is an ongoing activity that involves generating and implementing new ideas for products or services (Amade et al., 2023). In educational institutions, both product and process innovations enhance the value of services for students and faculty (Solaimani & Van der Veen, 2023). Innovation enables institutions to develop unique qualities that provide a competitive edge in the education sector (Baah et al., 2023). It contributes to improvements in both educational outcomes and organizational performance (Wadho & Chaudhry, 2023; Lee et al., 2022).

Through process innovation, educational institutions can enhance operational efficiency and service delivery. Successful innovation requires effective management, innovation capabilities, and strategic use of technology (Somwethee et al., 2023). Innovation is crucial for sustaining and improving the performance of educational institutions (Siagian et al., 2023). This study uses indicators based on Tarigan and Tarigan (2024) to assess the innovation process, focusing on the introduction of new processes, the adoption of new technologies, ease of use, and alignment with organizational culture.

#### *2.5 Organizational Performance (OP)*

The practical implementation of strategies like lean management, total quality management, and efficient SC management can significantly improve OP, especially when these strategies are aligned with the institution's objectives (Basana et al., 2024; Sahoo, 2023). For educational institutions in Irbid, organizational performance can be assessed by comparing their outcomes with those of peer institutions, particularly in terms of timely service delivery and the quality of educational results (Schniederjans & Khalajhedayati, 2023). OP refers to an institution's capacity to achieve its objectives and optimize the outcomes it delivers (Wang et al., 2023; Rajaguru & Matanda, 2023). In the context of education, this includes providing high-quality services, such as effective teaching, student satisfaction, and administrative efficiency, while also being cost-effective. Performance is also measured by how well an institution improves its standing in the educational sector, which can be indicated by increased enrollment, improved reputation, and overall student success (Corte-Real et al., 2017).

In educational institutions, performance can be assessed using both financial and non-financial metrics, such as operational cost management, service delivery efficiency, the quality of educational content, and the adaptability to new teaching methods (Sundram et al., 2023). The success of an institution is often reflected through indicators like financial stability, resilience to changes, organizational culture, employee growth, and staff retention (Song and Liao, 2023).

For this study, the evaluation of organizational performance will focus on operational indicators such as process quality, fulfillment of educational requirements, student satisfaction, timeliness in service delivery, and the ability to adapt to new challenges and innovations (Hani, 2023).

#### *2.6 Relationship Between Research Concepts*

##### *2.6.1 Relationship between PMC and ITI*

The PMC of an educational institution refers to its ability to generate, expand, or modify resources to effectively meet its goals. In the context of information technology (IT) integration, the institution's ability to manage IT projects influences how well IT systems are integrated into the organization, impacting overall performance. The speed of service delivery in

educational institutions increasingly relies on effective use of evolving information technologies (Amade et al., 2023). As information technology continues to develop, it accelerates the flow of information and improves processes within different departments. The more an institution is capable of managing information, data, and systems while addressing associated risks, the better its IT performance and integration will be (Selvakumar & Amade, 2024). Dynamic capabilities within the institution also play a role in shaping decisions made by project managers when utilizing integrated information technologies (Abbady et al., 2019).

**H<sub>1</sub>:** *PMC positively impacts ITI.*

### 2.6.2 Relationship between PMC and SCC

The project management capability in an educational institution reflects its ability to manage resources effectively to achieve project goals through proper coordination. Project management capabilities are crucial in planning and executing educational projects and ensuring proper coordination with supply chain elements, such as resource procurement and material delivery (Misbahuddin et al., 2024). Strong coordination between project managers and supply chain partners ensures that material procurement aligns with institutional needs (Agarwal & Narayana, 2020). Absorptive capacity within the institution, through processes such as exploration, assimilation, and exploitation of information, positively influences supply coordination, particularly in managing relationships with suppliers. The higher the institution's ability to communicate, coordinate, and share information with both internal and external stakeholders, the more effective the SC coordination will be (Somwethee et al., 2023). PMC ensures informed decision making during the SC process, improving the procurement and delivery of materials and services in educational projects (Tarigan & Tarigan, 2024).

**H<sub>2</sub>:** *PMC positively affects SCC.*

### 2.6.3 Relationship Between PMC and PI

The PMC of an educational institution, which includes the ability to generate, expand, or modify resources, is crucial for effectively managing PI (Wang et al., 2021). Knowledge management within projects, particularly leveraging employees' expertise and exploring new knowledge, significantly impacts both process and product innovation. Successful innovation relies on employees possessing the necessary skills, and their ability to apply this knowledge leads to value-adding innovations within the institution (Oke & Takeda, 2022).

Furthermore, top management's role in fostering organizational capabilities is essential for enhancing the institution's innovation capacity, leading to the generation of new processes and services (Somwethee et al., 2023). Institutions with a higher ability to manage and process resources are more likely to develop successful process innovations (Moshtari et al., 2021). Effective management also allows institutions to adapt their processes and integrate new technologies, ensuring more effective achievement of their goals (Li, 2015).

**H<sub>3</sub>:** *PMC has a positive effect on PI.*

### 2.6.4 Relationship Between ITI and SC

Information technology plays a critical role in facilitating information sharing, improving data quality, and enhancing communication frequency, all of which contribute to better supply chain coordination with external partners (Agarwal & Narayana, 2020). Integrated IT systems enhance SC integration and significantly improve overall performance (Kim et al., 2013). The efficient use and processing of data through these systems help educational institutions make more informed and timely decisions (Magutu et al., 2015). When IT is properly integrated with accurate data, it simplifies coordination and communication, streamlining processes (Amade et al., 2023). Effective IT integration improves coordination across the SC, boosting performance and efficiency. Information, physical, and financial flows are essential components of SC integration that influence coordination and foster strong collaborative relationships between partners (Rajaguru & Matanda, 2019).

**H<sub>4</sub>:** *ITI positively influences SC.*

### 2.6.5 Relationship Between ITI and PI

The integration of IT plays a crucial role in driving process innovation within organizations. By automating key processes, it enables organizations to achieve better efficiency and effectiveness (Zhou & Xu, 2024). The ability to utilize and manage IT in educational institutions can significantly enhance data analysis capabilities, helping the institution determine the most suitable innovation processes. IT integration facilitates collaboration with all supply chain components involved in process innovation, allowing for smoother operations (Zhang et al., 2016). Contractor and client integration through IT can have a significant impact on advancing process innovation (Siagian et al., 2022). IT integration serves as a key enabler in the supply chain, driving the innovation processes necessary to maintain competitiveness (Oke & Takeda, 2022). Information sharing with customers regarding product innovations is increasingly enabled through integrated IT systems, contributing to innovation (Song & Liao, 2019). Furthermore, IT ensures the delivery of high-quality products and services that meet organizational needs while simultaneously reducing operational costs (Rajaguru & Matanda, 2019).

**H5:** *ITI has a positive effect on PI.*

#### 2.6.6 Relationship Between ITI and OP

The ability of educational institutions to integrate IT effectively enhances their capacity to manage data and build strong relationships with external and internal partners, directly influencing organizational performance (Harianto et al., 2024; Magutu et al., 2015). Both internal and external integration within the institution can lead to important enhancements in key performance indicators such as cost, quality, delivery, and flexibility (Ataseven & Nair, 2017). IT plays an essential role in facilitating quick and efficient coordination, which boosts organizational performance (Yu et al., 2021). Institutions that leverage digital data and integrate it into their operations can improve performance by enabling real-time information sharing and visibility across various departments. Integrated IT systems not only improve the quality and speed of information sharing but also lead to higher levels of customer satisfaction (Agarwal & Narayana, 2020). Furthermore, integrating IT within the supply chain helps reduce production costs and improve overall performance (Chang et al., 2016).

**H6:** *ITI positively influences OP.*

#### 2.6.7 Relationship Between SC and PI

SC is essential for ensuring the efficiency and effectiveness of activities within the SC (Baah et al., 2023). By effectively coordinating all components, organizations create an environment that encourages process innovation. Strong coordination among supply chain partners helps identify areas for improvement and promotes the development of innovative processes (Solaimani & Van der Veen, 2022). Established cooperation within the supply chain is crucial for driving innovation, as strong partnerships with suppliers enable the adoption of new ideas and innovations that enhance overall OP.

**H7:** *SC positively influences PI.*

#### 2.6.8 Relationship Between SC and OP

Supply coordination plays a pivotal role in integrating, managing, and synchronizing various supply chain activities to ensure effective operations. Coordination ensures processes run smoothly, thereby positively influencing organizational performance (Ataseven & Nair, 2017). By involving suppliers in coordination processes, companies ensure the uninterrupted flow of goods and services, optimizing resource usage and enhancing performance (Sundram et al., 2018). Effective supply chain coordination can improve operational efficiency by reducing inventory levels and ensuring timely delivery (Yu et al., 2021). Coordinated companies can respond faster to market changes, enhancing their ability to adjust products and distribution strategies.

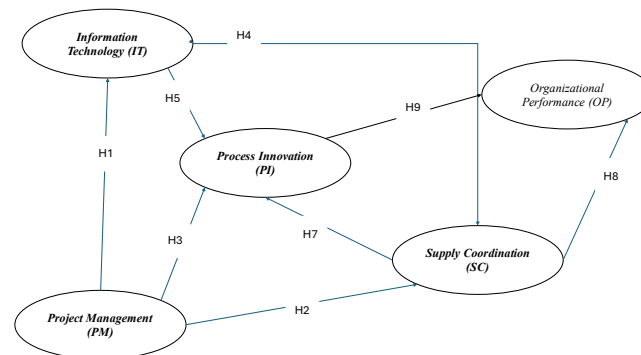
**H8:** *SC positively influences OP.*

#### 2.6.9 Relationship Between PI and OP

Process innovation plays a significant role in enhancing organizational performance (Sahoo, 2021). By empowering employees to generate innovative ideas in operations, organizations can positively impact performance (Amade et al., 2023). Innovations in logistics, packaging, and operations can lead to better organizational outcomes (Baah et al., 2023). Process innovation improves efficiency, productivity, flexibility, and quality, impacting organizational performance by streamlining operations, reducing resource consumption, and increasing profitability. Process innovation also helps organizations adapt to changes and seize new opportunities, improving competitiveness.

**H9:** *PI has a positive effect on OP.*

In Fig. 1, we can use arrows to represent the direction of influence. The arrows should point from the influencing variable to the one being influenced. The figure will serve as a graphical summary of the relationships discussed in your research.



**Fig. 1.** Research Conceptual Model

### 3. Research Methods

This study adopts a causal quantitative approach, which is appropriate for identifying and measuring the causal relationships between different variables. The primary objective of this research is to explore the magnitude and direction of influence exerted by the independent variables on the dependent variable. Specifically, the study aims to investigate how PMC, ITI, SC, PI impact OP.

#### *Target Population and Sample Selection*

The target population for this study consists of 85 suppliers or vendors who provide goods and services to educational institutions located in Irbid, Jordan. These suppliers play a critical role in supporting the infrastructure and services within the educational sector. The selection of the sample is based on a judgmental sampling technique, which involves selecting specific individuals or entities based on particular criteria relevant to the research. The criteria for the selection of vendors are:

1. **Active Participation:** Vendors must have been involved in transactions with educational institutions in Irbid within the last two years.
2. **Taxpayer Identification Number (TIN):** The vendor must possess a valid taxpayer identification number, ensuring legitimacy in business operations.
3. **Proof of Tax Payments:** Vendors are required to have evidence of tax payments, ensuring they are compliant with local tax regulations.
4. **Valid Bank Account:** Vendors must have a valid bank account for transaction payments, ensuring the reliability of financial exchanges.

This selection ensures that the sample is composed of suppliers who are actively engaged in the educational sector and meet certain operational and regulatory standards, which enhances the validity and reliability of the study's findings.

### 4. Analysis and Discussion

The distribution of questionnaires to vendors serving educational institutions in Irbid was managed centrally by project managers and procurement departments within the institutions. A total of 85 vendors completed the survey, and the results are summarized in **Table 1**, which provides a profile of the respondents.

#### *4.1 Respondent Profile*

From Table 1, the majority of the respondents were from top management, with 32 respondents (37.65%) identified as owners or top executives and 22 respondents (25.88%) identified as managers. This indicates that a significant portion of the respondents hold senior positions within their organizations, directly overseeing procurement and project processes. This is particularly relevant because these senior executives are likely to influence or make decisions regarding procurement strategies, project management, and IT integration, providing valuable insights into the institutional and operational dynamics of the educational projects.

The data also reveals that the foundation manages over 50 educational institutions in the region. Suppliers cater to a wide range of needs, including infrastructure and facilities, with 48 respondents (56.47%) representing these sectors. Additionally, 16 respondents (18.82%) provide services related to libraries and computers, demonstrating the diverse range of products and services required to support educational institutions.

Regarding the suppliers' experience with project information technology, it was noted that 55 respondents (64.71%) have been using IT solutions for over 10 years in their operations. This reflects a robust and longstanding relationship between the suppliers and the educational institutions, and highlights the importance of IT integration in these processes. Given their long experience, the suppliers are well-acquainted with the technological needs and operational requirements of the educational institutions, which plays a crucial role in shaping the effectiveness of IT integration and coordination in the supply chain.

#### *4.2 Outer Model Evaluation*

Following the data collection, the primary data analysis focused on assessing the outer model values, which are crucial for confirming the validity and reliability of the measurement model. The outer model analysis is detailed in Table 2, which outlines the factor loadings, composite reliability, and Cronbach's alpha values for the various constructs.

##### *4.2.1 Convergent Validity*

Convergent validity is evaluated through the factor loadings, with a minimum acceptable value of 0.50. The values presented in Table 2 will show whether the indicators are sufficiently strong in measuring their respective constructs. Factor loadings above 0.50 suggest that the indicators are reliable and capable of explaining the variance in the latent variables.

#### 4.2.2 Discriminant Validity

Discriminant validity is assessed by comparing the cross-loadings between the constructs. Each indicator should have a higher loading on its assigned construct compared to any other construct to establish discriminant validity. This ensures that the constructs are distinct and not overlapping, which is essential for testing the hypothesized relationships between them.

#### 4.2.3 Reliability Analysis

The reliability of the measurement model is evaluated using **composite reliability** and **Cronbach's alpha**. Values above 0.700 for both indicators suggest that the scales used in this study are reliable and consistent. These values will be presented in Table 2, ensuring that the measurements are stable and trustworthy.

#### 4.3 Hypothesis Testing

Once the validity and reliability of the measurement model are confirmed, the next step is to test the hypotheses outlined in the theoretical framework. The analysis will involve examining the path coefficients and their significance levels, with a P-value less than 0.05 or t-statistics greater than 1.96 indicating a significant relationship between the variables. The hypothesized relationships, such as the positive influence of project management capability on IT integration or the impact of supply coordination on organizational performance, will be tested through path analysis.

By evaluating these hypotheses, the study aims to provide insights into the causal relationships between the constructs and determine how factors such as project management capability, IT integration, supply coordination, and process innovation contribute to the overall performance of educational institutions.

#### 4.4 Implications and Future Directions

The findings from the analysis will have significant implications for both theory and practice. From a theoretical perspective, the study will contribute to understanding the interplay between project management capability, IT integration, supply coordination, and process innovation in the context of educational institutions. Practically, the results could inform decision-making in educational project management and supply chain coordination, highlighting areas where improvements in IT integration and project management capabilities can drive enhanced performance.

Future research could further explore how these relationships evolve over time, considering different regional contexts, and potentially incorporate additional variables such as organizational culture or external environmental factors. The role of digital transformation in educational institutions also presents an area for further study, especially in light of rapid technological advancements.

**Table 1**  
Respondent Profile Description

Profile	Descriptive	Frequency	Percentage
Gender	Male	58	68.24%
	Female	27	31.76%
The position of the respondent supplying goods to the foundation organization	Saff	18	21.18%
	Supervisor	11	12.94%
	Manger	22	25.88%
	Owner/Top management	32	37.65%
Products or services provided by suppliers	Office	8	9.41%
	Education	5	17.65%
	Halth Services	8	9.41%
	Lbrary and Computers	16	18.82%
Education	Facility and Infrastructure	48	56.47%
	High School	15	17.65%
	Diploma	6	7.06%
	Graduate	53	62.35%
Number of employees in the supplier company	Postgraduate	11	12.94%
	Less than 10 workers (Small)	39	45.88%
	10-101 workers (Medium)	22	25.88%
Length of use of information technology by suppliers	More than 100 employees (Large)	24	28.24%
	< 4 Years	11	12.94%
	6 - ≤ 8 Years	11	12.94%
	8 - ≤11 Years	8	9.41%
Lenth of work of respondents as suppliers	> 11 Years	55	64.71%
	< 3 Years	7	8.24%
	4 - ≤ 6 Years	9	10.59%
	9 - ≤8 Years	13	15.29%
	9 - ≤10 Years	5	5.88%
	> 10 Years	51	60.00%

**Table 2**  
Indicator Validity and Reliability

Item of Research	Factor loading	Cronbach Alpha	Composite Reliability	AVE
<b>PMC</b>		0.874	0.875	0.665
Management consistently encourages change to respond to evolving developments	0.827			
Management implements internal changes to align with external shifts	0.900			
Management has the ability to effectively combine its resources	0.807			
Management can arrange its available resources as required	0.784			
Management is capable of efficiently executing the organization's operational tasks	0.740			
<b>ITI</b>		0.895	0.900	0.706
The information technology is dependable	0.871			
The information technology has well-defined objectives for the organization	0.815			
The information technology has contributed added value or benefits to the organization	0.832			
The information technology is updated when necessary	0.811			
The information technology meets all necessary requirements	0.865			
<b>SCC</b>		0.888	0.890	0.645
The company collaborates with external partners to forecast the organization's needs	0.840			
The company exchanges information with external partners				
The company works with external partners to resolve challenges faced	0.705			
The company includes external partners in the development of long-term plans	0.814			
The company involves external partners in enhancing the production process	0.786			
The company collaborates with external partners in planning for future needs	0.843			
	0.817			
<b>PI</b>		0.901	0.901	0.773
The company works to develop new processes aligned with its internal functions	0.850			
The company employs advanced technology to address organizational needs	0.860			
The technology used by the company is user-friendly and easy to understand	0.892			
The company has implemented new processes that meet the organization's requirements	0.911			
<b>OP</b>		0.914	0.917	0.750
The company is capable of delivering high-quality products/services based on customer orders	0.887			
The company can produce products/services that meet customer specifications	0.820			
The company consistently provides products/services that meet customer satisfaction				
The company delivers products/services to customers in a timely manner	0.862			
The company has adequate flexibility in offering products/services to meet customer needs	0.902			
	0.850			

The results from the SEM analysis provide insightful findings on the relationships between project management capability, IT integration, supply coordination, process innovation, and organizational performance in the context of educational foundation organizations in Irbid. Below is a summary of the key findings, with each hypothesis evaluated based on the path coefficients, t-statistics, and p-values.

#### 4.1 Validity and Reliability Testing

As demonstrated in Table 2, the outer model evaluation revealed that the factor loadings for all variables exceeded the minimum threshold of 0.50, confirming the validity of the measurement model. The lowest factor loading was observed in the **supply coordination (SCC)** variable for the item “**Company sharing information with external partners**” (SCC2), which had a loading of 0.705. Nevertheless, this value is above the required threshold, ensuring that all indicators effectively measure their respective constructs.

Additionally, the **AVE** values for all constructs were greater than 0.500, indicating good construct validity. **Cronbach's Alpha** and **composite reliability** values were also above the required 0.700 threshold for all variables, confirming that the constructs are reliable and consistent in their measurement. The lowest values for reliability were found in the **PMC** variable, where Cronbach's Alpha was 0.875 and composite reliability was 0.900, both of which exceed the acceptable reliability standards.

#### 4.2 Hypothesis Testing and Path Analysis

The hypothesis testing results, presented in Table 3, provide support for all the proposed relationships in the research model, with each hypothesis being accepted based on statistical evidence.

**Table 3**  
Research Hypothesis Assessment Result

Direct Path Coefficient	Coefficient	T -statistics	P- values
Project Managing Capability → IT Integration (H1)	0.715	12.201	0.000
Project Managing Capability → Supply Coordination (H2)	0.435	3.937	0.000
Project Managing Capability → Process Innovation (H3)	0.253	2.138	0.020
IT Integration → Supply Coordination (H4)	0.448	4.334	0.000



**Table 3**  
Research Hypothesis Assessment Result (Continued)

Direct Path Coefficient	Coefficient	T -statistics	P- values
IT Integration → Process Innovation (H5)	0.257	2.254	0.011
IT Integration → Organization Performance (H6)	0.303	2.277	0.019
Supply Coordination → Process Innovation (H7)	0.369	3.066	0.001
Supply Coordination → Organization Performance (H8)	0.388	2.754	0.003
Process Innovation → Organization Performance (H9)	0.237	2.011	0.025

#### 4.2.1 Project Management Capability (H1-H3)

*The first hypothesis: The effect of project management capability on IT integration*

This hypothesis was supported with a **t-statistic of 12.201** ( $>1.96$ ) and a **p-value of 0.000** ( $<0.05$ ). The **path coefficient of 0.715** suggests a strong positive impact of project management capability on IT integration. The effective resource configuration and adaptability of management facilitate the integration of IT systems that improve organizational efficiency.

*The second hypothesis: The effect of project management capability on supply coordination*

The hypothesis was confirmed with a **t-statistic of 3.937** ( $>1.96$ ) and a **p-value of 0.000** ( $<0.05$ ), showing a positive effect of project management capability on supply coordination (**path coefficient = 0.435**). Strong project management ensures better resource allocation and partner involvement in the forecasting and problem-solving process, which improves coordination in the supply chain.

*The third hypothesis: The effect of project management capability on process innovation*

With a **t-statistic of 2.138** ( $>1.96$ ) and a **p-value of 0.020** ( $<0.05$ ), this hypothesis was supported (**path coefficient = 0.253**). The findings suggest that organizations with effective project management capabilities are more likely to introduce new processes that align with internal needs and technological developments, stimulating innovation.

#### 4.2.2 IT Integration (H4-H6)

*The fourth hypothesis: The effect of IT integration on supply coordination*

This hypothesis was strongly supported with a **t-statistic of 4.334** ( $>1.96$ ) and a **p-value of 0.000** ( $<0.05$ ), indicating a significant positive effect (**path coefficient = 0.448**). IT integration facilitates information sharing and enhances the coordination of supply chain activities, allowing for better planning and execution of supplier needs.

*The fifth hypothesis: The effect of IT integration on process innovation*

The results confirmed this hypothesis with a **t-statistic of 2.254** ( $>1.96$ ) and a **p-value of 0.011** ( $<0.05$ ), revealing a positive effect (**path coefficient = 0.257**). IT integration supports the creation of new processes, aligning technology with the organization's goals, and enhancing innovation efforts.

*The sixth hypothesis: The effect of IT integration on organizational performance*

This hypothesis was validated with a **t-statistic of 2.277** ( $>1.96$ ) and a **p-value of 0.019** ( $<0.05$ ), demonstrating a positive relationship (**path coefficient = 0.303**) between IT integration and organizational performance. IT integration increases efficiency, improves customer satisfaction, and ultimately contributes to better overall performance.

#### 4.2.3 Supply Coordination (H7-H8)

*The seventh hypothesis: The effect of supply coordination on process innovation*

This hypothesis was supported with a **t-statistic of 3.066** ( $>1.96$ ) and a **p-value of 0.001** ( $<0.05$ ), indicating a positive effect (**path coefficient = 0.369**). The coordination with external partners helps in resolving operational challenges, improving production processes, and driving innovation.

*The eighth hypothesis: The effect of supply coordination on organizational performance*

The hypothesis was accepted with a **t-statistic of 2.754** ( $>1.96$ ) and a **p-value of 0.003** ( $<0.05$ ), demonstrating that effective supply coordination has a significant positive impact (**path coefficient = 0.388**) on organizational performance. By ensuring timely deliveries and addressing supply chain issues, supply coordination leads to improved service quality and customer satisfaction.

#### 4.2.4 Process Innovation (H9)

*The ninth hypothesis: The effect of process innovation on organizational performance*

This hypothesis was confirmed with a **t-statistic of 2.011** ( $>1.96$ ) and a **p-value of 0.025** ( $<0.05$ ), indicating a positive effect (**path coefficient = 0.237**). The introduction of innovative processes aligned with organizational needs contributes to better performance by meeting customer demands and deadlines.

#### 4.3 Theoretical and Practical Implications

The findings of this research have several theoretical and practical implications. From a **theoretical perspective**, the study contributes to the resource-based view (RBV) of organizational capabilities, demonstrating that project management capabilities, supported by IT integration and effective supply coordination, are vital drivers of organizational success. These results enhance the understanding of how internal capabilities influence performance outcomes, particularly in the context of educational organizations.

From a **practical perspective**, the study underscores the importance of investing in project management capabilities and IT systems to drive efficiency and innovation. Educational foundation organizations should prioritize strengthening their project management capabilities, fostering strong relationships with suppliers, and integrating IT solutions to enhance performance. Additionally, process innovation and supply coordination play pivotal roles in improving organizational outcomes.

In conclusion, the study highlights that PMC, IT integration, SC, and PI are key drivers of organizational performance in educational foundation organizations in Irbid. These findings provide valuable insights for both academics and practitioners aiming to improve organizational outcomes in the education sector. By focusing on enhancing project management capabilities, fostering IT integration, and strengthening coordination with suppliers, educational institutions can improve their service delivery, customer satisfaction, and overall performance.

### 5. Conclusion

This study explored the critical role of PMC in enhancing OP within educational foundation organizations in Irbid, with a focus on the mediating effects of ITI, SC, and PI. Four research questions guided the study, which examined how project management capability influences these factors and how they, in turn, affect organizational performance.

The analysis confirmed that all nine hypotheses proposed in the study were supported, providing strong evidence for the relationships between the variables. Key findings include:

1. **PMC:** Project management capability, defined as the ability to adapt to changes and integrate resources effectively, significantly enhances **ITI**, **SC**, and **PI**. By leveraging this capability, project managers improve both the internal and external processes that are essential for efficient organizational operations.
2. **ITI:** The integration of information technology systems plays a crucial role in supporting organizational activities. IT systems streamline reporting, facilitate decision-making, and improve the efficiency of interactions with external suppliers, enhancing **SC** and enabling **PI**.
3. **SC:** Effective **SC** involves working closely with external partners to address operational challenges, improve production processes, and plan strategically for future needs. This not only strengthens supply chain management but also contributes to process innovation and boosts overall organizational performance.
4. **PI:** The ability to develop and implement new processes aligned with organizational goals is essential for **PI**. The use of advanced technology to meet internal and external needs drives innovation, improving operational efficiency and organizational outcomes.

#### Contribution to Organizational Competitiveness

The findings of this research offer valuable insights into how **PMC**, coupled with **ITI**, **SC**, and **PI**, can significantly enhance **OP**. By improving the efficiency and effectiveness of organizational processes, these capabilities contribute to greater profitability and a competitive edge in the marketplace.

**PM** play a central role in this process, acting as facilitators who ensure that all elements—IT systems, supply coordination, and innovation—are properly integrated to optimize organizational outcomes. The study emphasizes the importance of continuous investment in these areas to ensure sustained improvements in performance.

#### Practical Implications

Educational foundation organizations should invest in developing strong project management capabilities, integrate cutting-edge IT solutions, and build robust relationships with external suppliers. These actions will not only improve operational efficiency but also enable the organizations to remain competitive and adaptable in a rapidly changing environment.

In conclusion, this research underscores the critical role of project management in driving organizational success and highlights the importance of strategic integration of technology, supply chain management, and process innovation. By

focusing on these key areas, educational institutions and other organizations can enhance their operational performance and achieve sustainable growth.

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