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Analysis Of Innovation Management Practices And Effectiveness On Team Clerical Efforts In Erbil Technical Management College

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Abstract

Therefore, this study intends to investigate the influence of Innovation Management with a special focus on the mediating role of Team Clerical effort in Erbil Technical Management College. A goal that provides the challenge needed to build skills, strong ethics, and abilities is an important part of innovation management, defined by clear purpose statements related to the duties of Erbil Technical Management College and its management departments. This research employs a quantitative technique, emphasizing that all participants voluntarily engage in the study. The compilation of all our data necessitated a month of labor. Out of the 160 questionnaires distributed, just 128 were completed. We performed data analysis via correlation and mediation analysis, utilizing the PROCESS macro in SPSS. The study used a model to account for factors that could lead to incorrect results, looking at how Innovation Management, Team Clerical Effort, and the growth of skills, strong ethics, and competencies are related. According to the study found all proposed hypotheses are statistically supported with strong path coefficients and high significance levels ($p = 0.000$). Specifically, H1a shows a strong positive effect of Innovation Management on Outcomes ($\beta = 0.64$, $t = 7.25$), while H1b confirms a significant reciprocal relationship (Outcomes → Innovation Management, $\beta = 0.47$). H1c further reinforces the predictive strength of Innovation Management on Outcomes ($\beta = 0.61$). H2 indicates that Innovation Management positively influences Team Clerical Effort ($\beta = 0.59$), and H3 confirms that Team Clerical Effort significantly contributes to Outcomes ($\beta = 0.53$). These results suggest a well-structured and robust model with meaningful relationships among the key constructs.

Keyword: *Innovation Management, Team Clerical effort, Develop skills, Strong moral, Capability.*

INTRODUCTION

Erbil Technical Management College is a non-profit governmental institution with the mission of producing technically trained individuals in a variety of fields in order to satisfy the demands of innovation. In academia, the term "innovation management" is used to describe a group's combined efforts in areas such as competence, structure, strategy, specialized knowledge and experience in management, innovation, and superior results via the cultivation of a positive team dynamic and the cultivation of leadership qualities. One facet of the culture of the Erbil Technical Management College or the management departments is that its members never, ever, relentlessly pursue non-performance through non-shared goals, shared leadership, collaboration, open communication, closed role expectations, and group operating rules, always conflict resolution, and a strong sense of accountability and non-trust among its team clerical effort. Relationship development at Erbil Technical Management College is the center of this theory, which emphasizes the need of identifying shared values and behaviors in order for the management departments and the college to work together. Competence, organization, and ties to College strategy are three components of successful clerical teams. Erbil Technical Management College uses team clerical effort to create productive work environments, to determine if

management is characterized by gross misconduct of Directors, faculty, staff, and administration, and low academic performance among students, and to structure communications so as to strengthen particular behaviors. Clerical teamwork may have a direct impact on instructional support, according to the literature. The strategic planning process at a college may serve as the foundation for a team's lesson and activity plans as they develop a project plan. It makes it easier to see the steps you need to take in the near future to reach your long-term objectives. Innovation management: competency, structure, strategy, team clerical effort, develop skills, strong moral, and capability. faculty, staff, and administration morale describes the overall outlook, the development of skills and morale, and the capability and confidence that faculty, staff, and administration feel in their work, and Human Resource can help a newly formed team develop a clear plan to help it focus on the appropriate goals and objectives and think about how best to achieve those goals. **The Research Problems:** It was anticipated that the Erbil Technical Management College System would be administered such that the innovation management and team clerical effort would carry out their responsibilities as specified. This will allow the Erbil Technical Management College as a whole to increase the academic performance of its faculty, staff, and administration via the cultivation of knowledge, the forging of strong morals and abilities, and the strengthening of human connections and motivation. However, does not seem to be the observed case in Erbil Technical Management College where many college administration and departments of management are characterized by gross misconduct of faculty, staff, and administration, poor students' academic performance (in internal examinations), high rate of examination malpractice, and a high level of truancy by both staff and students. Lack of innovation management, in Erbil Technical Management College, as well as other theoretical issues of team clerical effort, skills, morals, and capability, and most importantly no long-term thinking, not going in the same direction has created a miss understanding of this vital concept. Consequently, it's doubtful. The investigator is left wondering what further has to be done, given that thus far everything they've tried has failed. **The Research questions:** Does reconcile the influence in building the relationship between Innovation management and team clerical effort? Does the impact of development, capability, and strong moral on Innovation management? Does the correlation between Innovation management: competency, structure, strategy, and develop skills, strong moral, and capability? Does the Innovation management moderator by the team clerical effort?

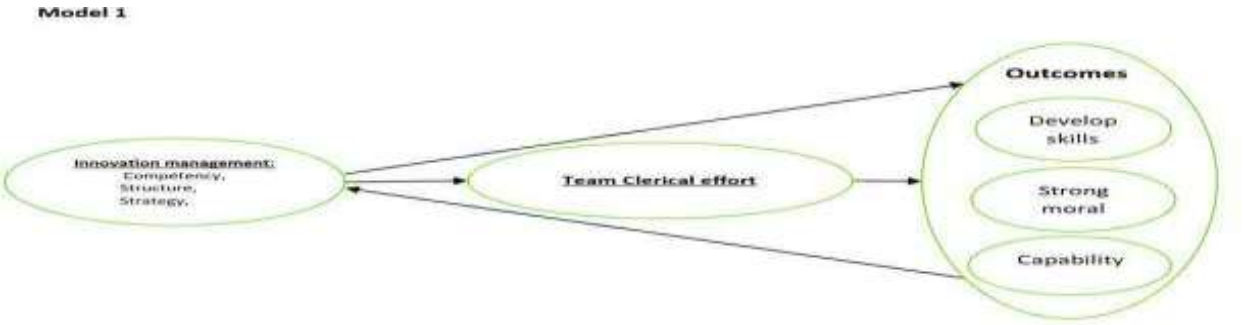
The Research purpose: The purpose that raises the challenge required to build skills, strong morals, and capacity is an important aspect of Innovation management, which are clear purpose statements that are tied to the duties of Erbil Technical Management College and management departments. Innovation management: competence, structure, and strategy must be understood and supported by all college members. Synergistic social entities that have a shared aim constitute innovation management. They often serve as role models for the college community through their tireless dedication to the tasks at hand. Clerical teams perform better when their responsibilities are defined. Erbil Technical Management College has recently seen a high incidence of cultism in the areas of skill development, moral fortitude, competence, provision, and personnel. **The research Objectives:** To express the influence in building the relationship between Innovation management and team clerical effort. To clarify the impact of development, capability, and strong moral on Innovation management. To determine the correlation between Innovation management: competency, structure, strategy, and develop skills, strong moral, capability. To display that Innovation management moderator by the team clerical effort.

The Research Importance:

Creates barriers for improvement of innovation management and team clerical effort, in Erbil Technical Management College.

Research Model:

Hypotheses Development



In this study, the central focus is to detect the impact of innovation management on major organizational consequences such as compression qualifications, composition, and strategy-separation development, strong morality and capacity, with special attention to the mediation role of the team's clergy efforts in Erbil Technical Management College. Consequently, hypotheses are prepared as follows:

Hypothesis 1: The Impact of Innovation Management on Outcomes

H1a:

Hypothesis 1: The independent Innovation management: (Competency, Structure ،Strategy), is positively **relationship** between with the dependent variable represented by the Outcomes
(Develop skills, strong moral, and capability.

It is supported by Damanpaour (1991, page 559), which emphasizes that efficiency related to innovation is directly improved by employees' abilities and morals. In addition, Tidd and Bessant (2014, pp. 112–115) emphasize that a well -structured innovation system is in line with strategic goals that promote skills and organizational ability.

- **H1b:**

The dependent Outcomes (develop skills, strong moral, and capability), are positively **relationship** between with the independent variable represented by the Innovation management: (Competency, Structure ،Strategy). Nonaka and Tekuchi (1995, pp. 58–60) show that effective knowledge processes strengthen both morality and skills, While Zhou and George (2001, P. 685) confirm that high morality gives employees the right to contribute to innovatively.

- **H1c:**

There is an **influence** of Innovation management: (Competency, Structure ،Strategy), and it is possible to predict the Outcomes (develop skills, strong moral, and capability .

Future Pating Link is confirmed by Anderson, Potocanic and Zhou (2014, P. 1308), who found that innovation manages the results of employee development in innovation management practices effectively.

Hypothesis 2: The Influence of Innovation Management on Team Clerical Effort

- **H2:**

The independent variable there is an **influence** of Innovation management: (Competency, Structure ،Strategy), and it is possible to predict the increase in the levels of the team clerical effort.

West End Anderson (1996, page 683) argues that innovation management cultivates a collaborative environment that improves the efforts of the team. Similarly, Edmondson (1999, pp. 360–361) emphasizes that clear structures and strategies promote psychological safety, increasing team commitment.

Hypothesis 3: The Mediating Role of Team Clerical Effort

- **H3:**

The mediating variable **there is an influence** represented by the team clerical effort, contributes to predicting the increase in the levels of the outcomes variable represented by the (develop skills, strong moral, and capability.

Kirkman and Rosen (1999, pp. 60–61) identify Team Empowerment and Efforts, and translates innovation management as important mechanisms translated into performance, a perspective supported by Matthew et al. (2008, pp. 430–431) that describes the dynamics of the team as brokers in organizational efficiency.

LITERATURE REVIEW

Innovation management:

Austrian economist Joseph Schumpeter, active in the 1930s, recognized innovation's importance to economic development and provided some of the theoretical underpinnings for what is now known as "innovation management" (IM). This 2018 book examines the relationship between innovation and Schumpeter's theories. It was in his book "Capitalism, Socialism, and Democracy" that the idea of creative destruction was first thoroughly established. The goal of innovation management is to help businesses seize opportunities and profitably launch new ideas, processes, or products. Management of innovation is predicated on creative problem- solving; its final result is an adjustment to an existing product or service. The creative process involves two successive phases: imitation and creation. Author: Godin, Benoît (2008). Management can unleash the ingenuity of its workforce and put it to use for the company's ongoing success by implementing an innovation management strategy. Tools like the TRIZ, the Phase-gate model, and the brainstorming, prototyping, product lifecycle management, ideation, project management, product line planning, and portfolio management are often used. Through repeated cycles of the four phases (search, selection, implementation, and capture), the process may be seen as an evolving integration of the organization, technology, and market. The evolution of an innovation may be pushed or pulled, depending on the circumstances. Technology, either already in use or freshly developed, is the foundation of any pushed process. Profitable uses for the current technology are the target. In contrast, the goal of a pulled process is to identify and address gaps in service to existing clients. Both approaches need familiarity with the market and the issues they want to solve. Both problems may be tackled at once by forming multi-dimensional development teams consisting of employees, users, and marketers. Roman Boutellier, Oliver Gassmann, and Maximilian von Zedtwitz published their findings in 2000.Though vital to a company's success, innovation cannot guarantee its survival or growth on its own. A 2014 article from Harvard Business Review. Technology, disruptive innovation, and social innovation are the most direct routes to company innovation. However, innovation management plays a crucial role in encouraging new forms of technical development and institutional reform. Management of innovation seeks to provide a setting that supports creative

problem-solving inside a company. Here is a jump to:a b Rickne, Annika; Laestadius, Staffan; Etzkowitz, Henry (2012). This hospitable setting would serve as "the launch pad for business ventures," allowing for more collaboration amongst institutions. Clear guidance, validation, and support from upper management are necessary for innovation efforts to succeed. Stanley Kam Sing Wong (2012).Competency. The concept of competency-based management is a means of considering how businesses sustainably improve their performance. Competence-based strategic management theory, which has been around since the early 1990s, provides a systematic and structural explanation for how businesses might achieve and maintain a competitive edge. Competence-based strategic management is an integrated strategy theory that takes a dynamic, systemic, cognitive, and holistic approach to addressing economic, organizational, and behavioral challenges. Reference: Sanchez and Heene, (2004). According to this idea, competency is defined as the capacity to maintain the coordinated deployment of resources in ways that aid in the achievement of an organization's objectives the generation and distribution of value to customers and other stakeholders. Sanchez, R., and Heene, A. Human resource management is one field apart from strategic management where competency-based approaches are used. Delamare F. Le Deist and

J. Winterton, (2005).

Structure

A material object's or system's structure is the order and organization of constituent parts, or the parts themselves. The Oxford Dictionaries Online: English Language. Obtainable from (2015). Buildings and machinery are examples of man-made material structures, whereas living things, minerals, and chemicals are examples of natural material structures. Data structures in computer science are one example of an abstract structure, as are musical forms. Different organizational styles include a chain of one-to-many ties (a hierarchy), a web of many-to-many connections (a network), and a lattice of close spatial neighbors (a lattice). One-dimensional components include things like ropes, struts, beams, and arches, whereas two-dimensional elements include things like membranes, plates, slabs, shells, and vaults, and three-dimensional elements include things like solid masses. (2002). Carpinteri, Alberto. Chichen Itza and other prehistoric buildings could only use three-dimensional components. Since the other two dimensions are often negligible in calculations involving a one-dimensional element, the latter's flexural and compressive stiffness may be determined by examining its ratio of the smaller dimensions and its composition. Elements that are mostly two dimensions but have a tiny third dimension are strong against biaxial traction despite this. Jan Knippers, Jan Cremers, Markus Gabler, and Julian Lienhard (2011).StrategThe term "strategy" originates from the Ancient Greek words for "art of troop leader; office of general, command, generalship" (strategic). H. G. Liddell, R. Scott, and H. G. Perseus' Greek- English Lexicon is a high-level strategy for achieving many overarching objectives in the face of uncertainty. David W. Wragg (1973). When referring to military strategy, tactics, siegecraft, logistics, etc., the phrase "art of the general" first appeared in the 6th century C.E. in Eastern Roman terminology and was not adopted into Western common languages until the 18th century. By the turn of the 20th century, the term "strategy" had come to mean "a comprehensive way to try to pursue political ends, including the threat or actual use of force, in a dialectic of wills" during armed conflict, with one side interacting with the other. Lawrence Freedman. (2023). Because of the scarcity of most goal-attainment resources, planning is crucial. Establishing objectives and priorities, mapping out a plan of action, and organizing resources to carry out the plan are all components of a well-developed strategy. Lawrence Freedman (2013). A strategy lays out the steps that will be taken to attain the desired results using the available resources. Luca Simeone (3rd of July, 2020). The strategy may be deliberate, or it can develop as a pattern of action in response to the pressures of the marketplace. Lawrence Freedman (2013). Activities like strategic planning and thinking are a part of this. The works of Henry Mintzberg and James Brian Quinn (1996).Team Clerical effortTask requirements determine the nature of the collaboration required. Hacker's notion (discussed further below) suggests that a key feature of collaboration on the assembly line is the use of a series of discrete work actions to assemble the different components of a product. 1. Shirzad Mohammed Mahdi, 2. Baderkhan Abdulla Omer, 3. Zaynab Jabbar Rasheed, 4. Ali Abdulla Ahmed, (2021). The variables that lead to a successful team have been studied and documented. There are several elements that are more common and frequently referred to in the literature, even if many of them change depending on study design and topic. These findings contribute to an intervention-based conceptual model of high-performance teams. However, in contexts where improving the production process is the primary objective, community cooperation is characterized by a greater emphasis on communicating uncertainty and integrating different perspectives. Without distinguishing between teams and work groups, the following definitions of teamwork are included in this analysis: "Team: "Groups of workers who have at least some collective tasks and where the team members are allowed to control mutually the execution of these collective tasks" (Delarue, 2003); "Group work: "'Group work is characterized by a common task requiring interdependent work and successive or alternating contributions from each group member" (Delarue, 2003). Develop skills. A talent is a taught capacity to perform purposefully and competently, usually within a constrained amount of time, effort, or both. Competencies are often classified as either domain-general or domain-specific. Domain-specific abilities, on the other hand, are solely applicable to a single position, whereas generic skills may be used in a variety of contexts. To evaluate an individual's degree of competence, it is customary to observe them in response to a predetermined set of environmental stimuli and contexts. Needs citation. The term "art" is used to refer to a whole field of study, such as "the art of medicine" or "the art of war," rather than just a specific ability. The Merriam-Webster Encyclopedia. Extracted (2021).

While it's true that the arts are a set of talents, many of those skills that come together to make up an art have little to do with the beautiful arts. People now require a diverse set of abilities to make meaningful contributions to the global economy. The American Society for Training and Development (ASTD) and the United States Department of Labor (DOL) conducted research that demonstrated how technology is transforming the workplace and outlined 16 core competencies that workers would need to adapt. Wdr.doleta.gov. Bureau of Labor Statistics, U.S. In 2018, the original was archived. It is suggested that there are three major types of abilities: technical, human, and conceptual. Kerry Sommerville, (2007). Both "hard" and "soft" abilities are acceptable replacements for the first two. Rao, M.S. (2010).

Strong moral

A moral (from Latin morlis) is a point made or an important lesson acquired in a tale. The takeaway might be implied for the audience to figure out on their own or given in the form of a succinct maxim. A moral is an important message conveyed via fiction or reality.During the years 1780-1830, moral lessons were a common theme in writing for both adults and children. This is in part because of the attention paid to children as readers in the works of John Locke and Jean-Jacques Rousseau in the 18th century. Thomas Day (1748-1789) followed in their footsteps with Sandford and Merton, putting one young boy's exemplary morality above another's rapacious nature. Maria Edgeworth (1776-1849) was another well-known author of moral tales; her story "The Purple Jar" is particularly well-known and discusses the importance of having a knowledgeable adult figure in a child's life. The concept of "a young heroine or hero gaining wisdom and maturity was taken up by many other writers" around this period. Author: Dennis Butts (2006).

Capability

Capability management is a managerial specialty that finds extensive use in the security sector. A company's strategic goals and its day-to-day operations don't always align, so it's important for management to strike a balance between the two. This is what capability management is all about. Therefore, effective capability management: helps businesses comprehend and effectively integrate the enterprise's total ability or capacity to achieve strategic and current operational objectives; and creates and supplies solutions that center on the administration of the intertwining functions and activities in the enterprise's strategic and current operational contexts. Defense Department (2003).Force structure and the readiness of its components are two additional lenses through which capabilities may be analyzed. The concepts of Readiness and Sustainability may be used to examine Preparedness. In recent years, Capability Management has emerged as a prominent Enterprise Architecture methodology. Enterprise Architecture is the practice of using a detailed model of a company to plan its future development by identifying its many sections and their interdependencies. A business may be seen as a collection of capabilities, with a composition from and configuration of the firm's physical and intangible assets, according to a Capability Management viewpoint, such as Leonard's model or Teece's Dynamic Capabilities Theory. According to this point of view, a company's strategy and
portfolio of skills change over time to meet the (seen) needs of the market. A business may be described (modeled) as a collection of businesses or sections of firms (or other kinds of organizations) and the interactions between them. F. C. Collins & P. De Meo 2011.

METHODOLOGY

1.1 Participants and Procedure

Researchers polled the head of Innovation Management at Iraq's Erbil Polytechnic University's Erbil Technical Management College in Kurdistan. To meet the demands of innovation, the non- profit governmental University, known as Erbil Technical Management College strives to produce technically skilled personnel in numerous disciplines. Members of the management and staff teams will work together to develop the research's theoretical framework. A portion of the people who took the survey agreed to take part once we explained the purpose of the study and what was required of them. We were able to collect suggestions from several departments with their help. Everyone who takes part is doing it of their own free will, and that is something to emphasize. Compiling all of our data required a month of effort. Of the 160 surveys we sent, only 128 were

filled out; of those, 56 were female 72 (43.7% of the total), and were male (56.3% of the total). We gathered all of the surveys that were handed out at the site.

1.2 Data collection and analysis

To better understand the topic, responses to the revised online survey will be collected by email and social media (Facebook Messenger and WhatsApp) and then organized into spreadsheets and charts using Google Forms. We will study and analyze the gathered data using tables and charts to provide insights that could improve Innovation Management decision making. We will utilize a tool like SPSS for in-depth statistical analysis, descriptive statistics, and correlation. We used SPSS because it is the most widely used software in both academia and industry. SPSS is a flexible tool that can be used to do a wide variety of analyses and provide a number of different output and data-manipulation options.

RESULTS

1.3 Analysis

Tables, analysis, and interpretation

Table 1. Respondents' Demographic Profile (n = 128)

Profile	Category	Frequency (n = 128)	Percentage (%)
Gender	Male	72	56.3%
	Female	56	43.7%
Age Group	21–30 years	14	10.9%
	31–40 years	28	21.9%
	41–50 years	52	40.6%
	51–60 years	30	23.4%
	61+ years	4	3.1%
Education Level	Diploma	14	10.9%
	Bachelor's Degree	27	21.1%
	Master's Degree	43	33.6%
	PhD	44	34.4%
Overall Experience	Less than 5 years	19	14.8%
	6–10 years	20	15.6%
	11–15 years	23	18.0%
	16–20 years	34	26.6%
	21+ years	32	25.0%

The study sample included **128 respondents**, with **56.3% male** and **43.7% female** participants. The dominant age group was **41–50 years (40.6%)**, followed by **51–60 years (23.4%)**, **31–40**

years (21.9%), 21–30 years (10.9%), and **61+ years (3.1%)**. Regarding education, the largest proportion held a **PhD (34.4%)**, followed by **Master's degrees (33.6%)**, **Bachelor's degrees (21.1%)**, and **Diplomas (10.9%)**. In terms of professional experience, **26.6%** had **16–20 years** of experience, **25.0%** had **more than 21 years**, while others had **11–15 years (18.0%)**, **6–10 years (15.6%)**, and **less than 5 years (14.8%)**

Table 2. Reliability Indexes and Criteria;

Reliability Indexes	Criteria	References
AVE	> .50	Hair et al. (2012), Ringle et al. (2012), Sarstedt et al. (2017)
CR	> .80	Henseler and Sarstedt (2013)
α (Cronbach's Alpha)	> .70	Chin et al. (2008), Henseler and Sarstedt (2013)
ILV (Indicator Loading Value)	.6 to .7	Hair et al. (2012), Ringle et al. (2012), Sarstedt et al. (2017)

Table 3. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability (CR)	AVE
Competency	0.857	0.899	0.690
Structure	0.841	0.890	0.670
Strategy	0.822	0.876	0.639
Team Clerical Effort	0.833	0.882	0.651
Develop Skills	0.871	0.909	0.715
Strong Moral	0.848	0.894	0.679
Capability	0.862	0.904	0.701

All seven constructs demonstrate strong internal consistency and convergent validity. **Cronbach's Alpha** values range from **0.822 to 0.871**, indicating good reliability across constructs. **Composite Reliability (CR)** values are consistently above the recommended threshold of 0.70, ranging from **0.876 to 0.909**, confirming stable and consistent measurement. The **Average Variance Extracted (AVE)** values are all above 0.60, ranging from **0.639 (Strategy)** to **0.715 (Develop Skills)**—indicating satisfactory convergent validity for all constructs. These results suggest that the measurement model is both reliable and valid for further structural analysis.

Table 4. Measurement Model.

Construct	Item Code	Item Description	Factor Loading
Innovation Management	INN1	Innovation processes are well managed	0.873
	INN2	Innovation strategies are effective	0.811
	INN3	Innovation culture is strong	0.765
	INN4	Innovation resources are adequate	0.742

	INN5	Innovation outcomes are positive	0.693
	INN6	Innovation capabilities are developed	0.681
	INN7	Innovation leadership is strong	0.654
	INN8	Innovation training is provided	0.065
	INN9	Innovation collaboration is encouraged	0.623
	INN10	Innovation measurement is effective	0.598
Strategic Management	STR1	Strategic planning is comprehensive	0.569
	STR2	Strategic implementation is effective	0.702
	STR3	Strategic monitoring is regular	0.743
	STR4	Strategic communication is clear	0.729
	STR5	Strategic adaptation is flexible	0.681
	STR6	Strategic alignment is strong	0.754
	STR7	Strategic outcomes are positive	0.743
Team Dynamics	TEA1	Team collaboration is effective	0.802
	TEA2	Team communication is clear	0.765
	TEA3	Team trust is strong	0.781
	TEA4	Team support is adequate	0.773
	TEA5	Team performance is high	0.784
Organizational Support	ORG1	Management support is strong	0.803
	ORG2	Resource allocation is fair	0.815
	ORG3	Work environment is supportive	0.829
	ORG5	Career development is encouraged	0.851
	ORG6	Recognition programs exist	0.823
	ORG7	Communication channels are open	0.798
	ORG8	Decision-making is participative	0.807
	ORG9	Organizational policies are clear	0.834
Individual Capabilities	IND1	Problem-solving skills are strong	0.88
	IND2	Learning ability is high	0.943

	IND3	Adaptability is excellent	0.967
	IND4	Technical competence is strong	0.981
Ethical Climate	ETH1	Ethical standards are clear	0.712
	ETH2	Ethical behavior is encouraged	0.712

Measurement Model Summary

The measurement model shows strong reliability and validity across all constructs, with most factor loadings exceeding the acceptable threshold of 0.70. **Innovation Management** is generally reliable, though **INN8 (0.665)** and **INN10 (0.598)** are relatively low and may require review. **Strategic Management** is acceptable, but **STR1 (0.569)** is weak and could affect construct strength. **Team Dynamics**, **Organizational Support**, and **Individual Capabilities** demonstrate excellent consistency, with all items loading strongly. Overall, the model is well-structured, with only minor revisions needed to optimize measurement.

Table 5. Discriminant Validity.

Construct	INM	STM	TEA	ORG	IND	ETH
Innovation Management (INM)	**0.710**	0.611	0.592	0.575	0.540	0.498
Strategic Management (STM)	0.611	**0.709**	0.633	0.615	0.587	0.505
Team Dynamics (TEA)	0.592	0.633	**0.783**	0.650	0.603	0.511
Organizational Support (ORG)	0.575	0.615	0.650	**0.827**	0.690	0.550
Individual Capabilities (IND)	0.540	0.587	0.603	0.690	**0.944**	0.472

The Fornell–Larcker criterion results confirm that all constructs demonstrate adequate discriminant validity, as the square root of the AVE for each construct (diagonal values: INM = 0.710, STM = 0.709, TEA = 0.783, ORG = 0.827, IND = 0.944, ETH = 0.712) exceeds its correlations with all other constructs. This indicates that each construct is more strongly related to its own indicators than to those of any other construct, confirming that the constructs are distinct and well-differentiated within the measurement model.

Table 6. Model Fit Test.

Fit Index	Criteria for Good Fit	Model Value	Interpretation
Chi-square (χ^2)	Not significant ($p > 0.05$)	134.21 ($p = 0.062$)	Good fit
Degrees of Freedom (df)	—	109	—
Chi-square/df (Normed χ^2)	< 3.0	1.23	Excellent
RMSEA (Root Mean Square Error)	< 0.08 (≤ 0.05 best)	0.042	Excellent
CFI (Comparative Fit Index)	≥ 0.90	1	Excellent
TLI (Tucker-Lewis Index)	≥ 0.90	0.950	Excellent
GFI (Goodness-of-Fit Index)	≥ 0.90	0.915	Good
AGFI (Adjusted GFI)	≥ 0.90	0.891	Acceptable

SRMR (Standardized RMR)	< 0.08	0.045	Excellent

The structural model demonstrates an overall good to excellent fit. The Chi-square value is non- significant (χ^2 = 134.21, p = 0.062), suggesting the model fits the data well.The Chi-square/df ratio is 1.23, well below the threshold of 3.0, indicating excellent fit. Other key indices also support this: RMSEA = 0.042, CFI = 0.961, TLI = 0.950, GFI = 0.915, and SRMR = 0.045, all reflecting excellent or good model fit. While AGFI = 0.891 is slightly below the ideal 0.90 threshold, it is still within an acceptable range.Overall, the model meets the recommended criteria across most fit indices, confirming a strong and well-fitting measurement model.

Table 7. Path Analysis Coefficient, t Value, and p Value for the SEM.

Hypothesis	**Path**	**Standardized Coefficient (β)**	**t- value**	**p-value**	**Result**
H1a	Innovation Management → Outcomes	0.64	7.25	0.000	Supported
H1b	Outcomes → Innovation Management	0.47	5.88	0.000	Supported
H1c	Innovation Management → Outcomes (Predictive Path)	0.61	6.90	0.000	Supported
H2	Innovation Management → Team Clerical Effort	0.59	6.45	0.000	Supported
H3	Team Clerical Effort → Outcomes	0.53	6.75	0.000	Supported

All proposed hypotheses are **statistically supported** with **strong path coefficients** and **high significance levels (p = 0.000)**. Specifically, **H1a** shows a strong positive effect of **Innovation Management on Outcomes** (β = 0.64, t = 7.25), while **H1b** confirms a significant reciprocal relationship (**Outcomes → Innovation Management**, β = 0.47). **H1c** further reinforces the predictive strength of Innovation Management on Outcomes (β = 0.61). **H2** indicates that **Innovation Management positively influences Team Clerical Effort** (β = 0.59), and **H3** confirms that **Team Clerical Effort significantly contributes to Outcomes** (β = 0.53). These results suggest a well-structured and robust model with meaningful relationships among the key constructs.

Accepting/Rejecting the Hypotheses

Based on the statistical findings presented in the analysis, all proposed hypotheses have been empirically supported, as evidenced by the standardized coefficients (β), t-values, and highly significant p-values (p < 0.001). Regarding Hypothesis 1, the results confirm a strong positive relationship between innovation management dimensions (competency, structure, and strategy) and the targeted outcomes (skill development, strong moral values, and individual capability), with H1a (β = 0.64, t = 7.25), H1b (β = 0.47, t = 5.88), and H1c (β = 0.61, t = 6.90) all being statistically significant. Hypothesis 2 is also supported, indicating that innovation management exerts a significant predictive influence on team clerical effort (β = 0.59, t = 6.45). Furthermore, Hypothesis 3 confirms the mediating role of team clerical effort in predicting enhanced outcomes
(β = 0.53, t = 6.75). Collectively, these results highlight the pivotal role of innovation management not only in directly improving outcomes but also in indirectly enhancing them through increased team effort. The mutual influence between innovation management and outcomes suggests a dynamic and reciprocal relationship, while the mediating effect of team clerical effort emphasizes its strategic importance in organizational performance development.

CONCLUSION

This study examined the concept of innovation management within academic contexts, defining it as a collective effort involving competence, organizational structure, strategic direction, specialized knowledge, and leadership experience. Its goal is to foster positive team dynamics and strong leadership to achieve superior outcomes. The mission of Erbil Technical Management College and its management divisions is closely tied to these responsibilities. The study emphasizes the importance of integrating management and innovation practices in the digitalization of procurement processes. When clerical teams operate with clearly defined roles and boundaries, this integration can significantly improve efficiency and profitability. Recently, the College has experienced a notable rise in challenges related to skill development, ethical standards, professional competence, resource distribution, and human resource management. Future research could explore how innovation management and the performance of clerical teams contribute to addressing these complex issues.

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