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Creativity, Innovation, Management, and Performance of Educational Enterprise in Africa, The Role of Network Ties. A Case Study of Ghana

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ABSTRACT
Aim: The aim of the study was to find the effect of creativity, innovation, and management on firm performance using network ties as a mediating factor.**Methods:** This study applied the descriptive research design, employing the quantitative approach. A total of 150 teachers were randomly selected across the 11 public senior high schools in the Accra Metropolis of Ghana to participate in the study.**Results:** The study found that creativity, innovation and management have positive significant relationship with performance in the educational enterprise (p-values<0.05). Network ties did not have very much of an influence on the link between creativity/innovation and performance. However, network ties significantly mediated the relationship between management and performance.**Conclusion:** The study concludes that innovation, creativity and management have significant relationship with performance in the educational enterprise. Network ties strongly mediate the relationship between management and performance.
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1. 0 INTRODUCTION

Research on creativity, innovation, and management has grown in importance, as they are all seen as fundamental to gaining an edge over competitors. As such, it is now imperative for companies, whether large or small, to innovate in order to remain competitive. The aim of this paper is to give an extensive understanding of the best practices for innovation, with reference to more than 10 years of research from the OECD (Box, 2009). This discourse looks into the recent shifts in how ideas are generated and reworked, in addition to at the rising amount of globalization, as well as an examination of how innovation can be employed to solve worldwide ecological issues.

Innovation is the art of utilizing creative thoughts and concepts to create something new. In many domains, generating continuous innovation is essential for both achieving success and staying afloat. It is essential to be creative and inventive in order to make more money by finding new ways to improve existing products or services. This encourages companies to go beyond the box and look for non-traditional solutions. As a result of this possibility, a new, fascinating, potentially profitable, yet adaptable concept develops. It also contributes to the long-term profitability and performance of all kinds of businesses (Baykal, 2018).

As a school principal, it is important to be aware of the needs of those they are leading, including the staff, student body and local community. Not only should both principals and teachers be knowledgeable in the scientific field, instructional materials and teaching methods, but they must also be able to motivate their students to develop a range of skills and an in-depth knowledge of educational topics. High-performing educators aim to display exceptional results in an effort to uplift the instruction level for the sake of bettering students' attainment in the long run. During the past two decades, an in-depth analysis of scholarly writings highlights how organizational success has often taken a backseat to inquiry, yet there is an abundance of data displaying a positive relationship among originality and accomplishment.

Researchers such as Loof and Heshmati (2002), Mairesse and Mohnen (2003), and Sorescu, Chandy and Prabhu (2003) highlighted the importance of innovation for successful corporate performance. Marques and Ferreira (2009) elucidated how effective innovation activities aid an enterprise in securing a more dominant competitive stance, which in turn leads to constructive competitive advantage, and subsequently, better performance.

Establishing relationships with government entities in emerging economies where public authorities usually manage regional resource allotments tightly could potentially give the organisation access to unavailable (and possibly regulated) market information that is not available to the public and, also, receive fewer bureaucratic obstacles (Luo et al., 2008). Additionally, due to the fact that efficient solutions to local market needs are

perceived from a community standpoint (Viswanathan et al., 2010), it could be advanced that firms with strong social network connections may benefit from increased local market intelligence creation and delivery.

Having strong connections between people can guard organisations against any potential environmental dangers, helping them to take full advantage of any new chances (Chung, 2012). Organizations with a more binding social web have the benefit of not only understanding the local market accurately, but they can also be informed quicker about any imminent government regulations, financial and non-financial rewards, and possibilities which might arise due to alterations in policy.

Research has drawn attention to the impact of having business network connections on a company's success in forming strategic plans (Chung, 2012; Luo et al., 2008; Yiu et al., 2007). According to Yiu et al. (2007), these networks explain "interactions between two or more individuals or entities that are involved in a business exchange such as buyers and vendors formal or informal."

“Ties with the business community provide chances for shared learning, transfer of inside information, and resource exchange to adjust to the unfamiliar market,” according to Li and Zhou (2010). Organizations with strong business network linkages, according to Yiu et al. (2005, p. 185), benefit from a “multidivisional structure that minimizes transaction costs and delivers economies of scale and scope.”

Chung (2012) revealed that higher business network ties result in increased effectiveness in market intelligence production and swiftness of market orientation for firms in industrialized nations. This is because inter-group transaction costs get minimized and chances for partner opportunism and contractual conflicts get reduced while access to important resources such as capital can be improved (Khanna & Rivkin, 2001; Sheng et al., 2011).

The effect of creativity and innovation on the performance of an organization is dependent on the setting in which these two concepts are employed (Sarooghi et al., 2015).

Previously done research on the field of organizational creativity has been largely originating from advanced Western European and North American economies. There is a lack of data from other, less established markets. This lack of exploration can lead to a scarcity of research exploring how and why the relationship between creativity, innovation, and performance occurs in more underdeveloped countries (Weinzimmer, Michel, & Franczak, 2011).

In numerous ways, the current study attempts to add to the existing knowledge on network links. Previous research has made major contributions to study performance by applying diverse approaches and elements, as previously stated (Anwar et al., 2018a; Messersmith et al., 2018; Baidoun et al., 2018). Few studies, however, have looked at the impact of creativity, innovation, management, and network ties on the success of educational enterprises. There is a compelling need to look at the factors that can assist educational enterprises in developing markets survive and thrive in the long run. A considerable amount of work has been done on the correlation between network linkages and inventive performance (Zeng et al., 2010; Larraeta et al., 2012; Zaheer & Bell 2005), but there have been relatively few investigations into how these practices fare in education-based initiatives in developing nations.

1.1 Objectives of the Study

The aim of the study was to find the effect of creativity, innovation, and management on firm performance using network ties as a mediating factor.

Specifically, the study sought to:

1. Examine the effects of innovation, creativity, and management on performance.
2. Examine the mediating role of network ties in the relationship between creativity and performance.
3. Examine the mediating role of network ties in the relationship between innovation and performance.
4. Examine the mediating role of network ties in the relationship between management and performance.

2.0 LITERATURE REVIEW

2.1 Creativity

Creativity is a far-reaching idea. People can come up with fresh ideas for tangible items. In organizations, creativity is the springboard for designing and can enhance systems and generate a productive atmosphere. Is imaginative thought the most efficient method to exchange messages and resolve business dilemmas? This subject will be explored in further depth. There is a bond between leaders and those who are creative, and creativity is seen as a crucial skill.

Having creativity as a driving force for innovating is very important. The incorporation of this condition to processes enhances their complexity in management. Processes which are focused on creative tasks differ substantially from regular business processes, as they demand a level of flexibility and have high risks. Additionally, possessing knowledge is inclined to help aid this process, as it can assist with someone's creative capabilities (Messersmith et al., 2018).

Theoreticians such as Sawyer (2012) offer two distinct perspectives on the creative process. Idealistic

theorists assert that creative ideation is the denouement of the process, while action theorists put more emphasis on the means of achieving creativity through physical and material means. This paper focuses on the strategy of action, which allows us to monitor the creative process in the moment as it develops. Researchers have argued that the creative process can be divided into phases, each of which involves both divergent and convergent components (Sawyer, 2012).

For this thesis, Sawyer conducted a study and selected the most important process theories to be used, which ended up being the eight stages of the creative process and the componential model. Made up of a compilation of the creative models of various researchers and scholars, Sawyer's theory has the emphasis on a more tangible approach to action. Likewise, Amabile's model is a well-known technique to act and has been widely researched to understand creativity in organizational settings.

Harris (2009) argued that creativity is a sign of excellent performance and should be viewed as a beneficial asset for businesses. He considered it an "atypical" aptitude as it goes above traditional bounds and expectations. Leaders have to incorporate imagination into their practices, in order to come up with revolutionary views. Creativity is a critical quality of all successful leaders, as their ideas are frequently developed from fresh outlooks.

Managers utilize creative problem solving to generate inventions which originate from a creative act and are distinct enough to lead to an expansion in the utilization of technology (Proctor, 2010). These creative acts involve a combination of existing knowledge which the human brain can utilize to compose novel concepts by combining pre-existing components. As an illustration, if we combine a cellular phone with a PDA (mini computer), an interactive touch screen can be added along with various applications, for example a calendar, a calculator, a global timekeeper, a contacts directory, or handwritten notes.

2.2 Innovation

Depending on whatever analysis is utilized, innovation has been defined from a variety of perspectives. It's been stated that the more functional the approach, the greater variety of definitions it encourages. Organizational innovation involves the application of creative and progressive ideas for restructuring, cost-cutting, organization of personnel, communication, and the introduction of new manufacturing technologies. By introducing new ideas, methods, products, or procedures into a job, group, or organization, significant benefits are created for the individual, group, organization, and society as a whole novel hierarchical structures are part of this innovation. The effectiveness of innovation is determined by how well a concept, product, service, or activity is embraced and accepted in its context.

The success of an innovation is reliant on the circumstances in which it is introduced, thus the environment plays a fundamental role in establishing how it is recognized. An analysis of innovation can include studying the effort needed to achieve desired outputs and the level of acceptance when it is brought into a particular context. This research will investigate the link between the commonly-used metric of measuring innovation in three key aspects (process innovation, product innovation, and administrative innovation) and organizational success in Malaysian logistics firms. No prior research has been done on this topic.

Innovation encompasses anything from products and processes to organizational approaches that help foster sustainable growth (Doran & Ryan, 2014). According to Abdi and Ali (2013), innovatory tactics pave the way for introducing and growing new services and products. Anning-Dorson (2017) saw innovation as the processes, and results, of changes within organizations that focus on providing valuable customer benefits, increasing capacity and garnering a competitive edge. It is fair to say that innovation often seeks to leave its mark on sustainability by creating environmental improvements (Becker & Egger, 2013). Innovation is a crucial element that can increase the productivity and contentment of any business. Implementing new techniques and strategies has been proven to improve performance and level the playing field in terms of competition (Agarwal, Krishna Erramilli, & Dev, 2003; Calantone, Cavusgil, & Zhao, 2002; Keskin, 2006). Research in growing economies have also suggested a correlation between investing in innovation and increased efficiency (Likar, Kopač, & Fatur, 2014).

2.3 Creativity and Innovation

The success of companies is due to innovative behavior (Walter, 2010). The creativity of a person or a small group of individuals typically refers to the production of new, useful ideas, whereas innovation refers to their effective implementation and use in the business context (Andreson, Potočnik & Zhou, 2014; Baer, 2012). According to research, the relationship between creativity and innovation is a multi-stage process; creativity is considered as a solution to difficulties in this context (Janssen, 2000; Krause, 2004). The problem will be identified, then ideas will be generated, an atmosphere of support for ideas will be created, and ultimately ideas will be implemented (Kang et al., 2015).

2.4 Creativity and Innovation in Businesses

Grigoriou and Rothaermel (2014) stress the importance of relationships between people, based intra-organizational knowledge network building upon individual collaboration, as effective in performing knowledge generation activities. Rogan and Mors (2014) point out that managers often network in order to obtain knowledge and information in order to choose between branching into new companies and taking advantage of existing ones. According to Capaldo et al (2014), the worth of an invention increases as the underlying knowledge becomes more refined, but this value can still diminish in certain cases. Tuertscher et al. (2014) looked into how teams working together from various involved parties could construct and introduce sophisticated technical systems, and realized that the operations that generate technical systems, which consist of trials and corrections, can also act as the foundation for an organization's shift. According to Wu et al. (2014), cognition, or people's proclivity to think and enjoy their work, is linked to inventive behavior, implying that these demands become more relevant when individuals are working under minimal autonomy and time constraints. Ugalde-Binda et al. (2014) investigated the impact of entrepreneurs' intellectual capital and personal traits on innovation outcomes. The case study showed that having intellectual capital in place is essential for the success of innovations, and that the characteristics and abilities of entrepreneurs are integral for encouraging investment in that capital to achieve better long-term outcomes. Trimi & Berbegal-Mirabent (2012) looked into firms utilizing cutting-edge technologies and underlined that having a dynamic, well-made business model for entrepreneurship has advantages with regard to innovation and continual progress, as outlined by Trimi & Berbegal-Mirabent (2012). Omri and Ayadi-Frikha (2014) studied a mediation model to trace the dynamics of small business growth, investigating the relationship between the entrepreneur's resources (human, social, and financial), inventive behavior, innovation, and expansion. Alba et al. (2013) also looked at the way industrial-level entrepreneurship and inventive behavior can shape patterns of knowledge-absorption and the capacity of new enterprises to develop. Kotey (2014) delved into the subject of how small businesses in rural Australia faced up to the challenge of dealing with drought, remarking that even though more bold concepts were at times dangerous possibilities, they had the potential to markedly improve the quality of life for local people. In addition, it was suggested that providing sufficient preparation and access to resources were able to reduce some of the underlying dangers.

Entrepreneurial enterprises, according to Zortea-Johnston et al. (2012), not only develop new markets or move old ones to offer new products or services, but they also change customer behavior. Fernandes et al., (2013) investigated and assessed the effects of these catalysts on financial performance in the company, defined as the ability to acquire, develop, and use information. Martnez-Román and Romero (2013) examined how personal characteristics of the entrepreneur and the direction of the organization can contribute to both incremental and large-scale innovations in products in small businesses. Kotabe et al., (2014) studied how the command of resources from government officials through political connections can help a company to increase both incremental and radical innovations combined with their ability to incorporate knowledge.

Through conducting business surveys, Crespi et al. (2014) studied the inventive actions of manufacturing companies in Latin America and the Caribbean. They identified the establishments with exceptional research and development performance, as well as their features associated with their success in the area, noting the primary features of innovative organizations and presenting evidence for the innovation process. Paunov (2012) suggests that the magnitude of the long-term effects of a global crisis can be determined through a company's capacity for innovation, having presented data from eight Latin American countries to demonstrate how some were more profoundly impacted than others. Mare et al. (2014) probed the bond between the features of the local workforce, in particular the abundance of immigrants and local professionals, and the possibility of creative breakthroughs within corporations. Lastly, Feria and Hidalgo (2012) inspected the flow of science and technology knowledge in four Mexican enterprises, and outlined their discoveries in the form of a case study.

Innovative and creative thinking in any aspect of the business is indispensable for success. It requires imaginative ideas to tackle management problems. Creativity is understood as the power to come up with novel and first-rate ideas to realize a target. Innovation is the employment of creativity to overcome an issue. Thus, creativity is a way of problem-solving. To enhance the productivity or results of the system, a brand-new approach, thought, product, or system is created. It aids to stimulate the imagination by getting people to take a differing look at the predicament. Drawing on ideas from Roopsing and Nokphromph (2017) and Nnadi (2014b), the entrepreneurial spirit serves to ensure the ongoing success of organizations. Through the application of imaginative and progressive methods, companies can find solutions to challenges, bolster inventiveness, raise productivity and gain a competitive edge. Innovative practices can be highly beneficial for businesses, as they bring about, changes, enhanced performance, better administration, and improved sustainability. This is crucial in that it allows for greater participation, engagement, and motivation of people, with the purpose of dramatically transforming infrastructures, cultures, personnel, products, and operations. In turn, organizations will find that their productivity, range, and involvement are increased, which can lead to greater business success and greater returns (Nnadi, 2014b).

According to the literature, resources determine the outcome of competitive advantage in terms of organizational performance. One of the resources is the ability to innovate. According to Camison-Zornoza et al., (2004), this word describes the novelty of a concept for organizational performance. As a result, innovation is critical to increasing organizational success. Innovation will create fresh, valuable, unique, and inimitable resources within the company that are difficult to duplicate. Cho and Pucik (2005) discovered that innovation leads to the enhancement of a firm's strategic resources and the development of a long-term competitive advantage, which is a critical feature of organizational performance.

Having additional help of those around you to successfully accomplish various tasks is a great way to maximize principal sourced resources. An organized collective allows better management and operation of activities. According to Sethi et al. (2001), organizational creativity assesses how different an organization's new products and services are from existing ones, as well as if they are beneficial for customers. Individual creativity in businesses is critical for unleashing an organization's creative and imaginative potential, according to industrial psychology specialists. As a result of their actions, they may have a spillover effect on the rest of the organization (Shalley & Gilson, 2004).

The capacity for clever problem-solving by an organization can lead to significant advancements in processes and products meant for their desired customers (Somech & Drach-Zahavy, 2013). Having an edge in the market, such as creating new methods or items, can give a company an essential competitive advantage that could be hard for other organizations to recreate (Hogan, & Coote, 2014; Rousseau, Mathias, Madden, & Crook, 2016).

The innovation process is complicated and involves the use of current and fresh data for economic gain (Escribano, Fosfuri, & Trib, 2009; Galende, 2006). Additionally, a number of types of innovation can be identified, in line with the existing literature on the area (Bigliardi & Dormio, 2009). In spite of its definition and categorization, innovation is often seen as a major production of value in an establishment and as an invaluable competitive asset (Jong & Vermeulen, 2006).

2.5 Management

Organizational objectives and activities must be coordinated in order to achieve goals in the most effective and productive manner. Management, leadership, and administration often overlap in their definitions and usage. Though the word administration is used more in the UK, Europe, and Africa, management is favored in parts of North America and Australia. (Hallgarten et al., 2016). The management of curricula in educational institutions is often referred to as a (logy) in and of itself (Bush, 2003).

Education management is the application of management principles to the field of education. It is evident that education and management are separate research fields. Applied management provides a way of creating and delivering services that meet pre-determined educational goals (Buchan, 2013).

Educational management in Africa is a complex issue involving many aspects. In some nations, issues of equity, access and resources all play a role in how educational systems are managed. To better understand educational management in Africa, research must be conducted around topics such as educational funding and efficiency, quality of educational infrastructure and pedagogy, and professional development and teacher training (Ratpenat, Ibarrola, Oña, & Royo, 2019).

Funding for education has been found to be an important factor in educational management in Africa. Despite increased spending for schooling in the last three decades, there are still disparities between countries in the amount of funding allocated, and efficiency of the resulting use of funds (Ratpenat et al., 2019). Furthermore, an emphasis on improving the quality of infrastructure and equipping schools with necessary resources is paramount to effective educational management in Africa (Nascimento, Sévigny, & Ligey, 2018).

A quality educational infrastructure is key for providing students access to education (Nascimento et al., 2018). According to the World Bank, in some African countries such as Nigeria, only 40 percent of primary schools have access to safe water and adequate sanitation (Lambert, Kibet, Abiresi, & Karue, 2019). In light of this, a quality educational infrastructure should involve the building of schools, furnishing these schools with adequate resources, and providing an appropriate learning environment (Lambert et al., 2019). These measures can help to improve student well-being and provide education to all students living within a certain region.

Professional development and teacher training are also important for effective educational management in Africa. Having access to appropriate resources and technology, as well as access to in-service training has been linked to increased teacher performance (Agwagah, 2017). Moreover, teacher training, such as the use of distance learning, can enable teachers to access the most current methods of teaching and establish good student-teacher relationships (Agwagah, 2017).

2.6 Network ties (Business and social ties)

Gaudici (2013) states that network ties are intricate connections between multiple external players that include both active and passive ties. Bigger firms have the option to use the exploitation and exploration approaches

side-by-side, which smaller businesses may not have the resources to do; thus they must be aware of potential prospects and use their network connections for extra resources (HewittDundas, 2006; Theresia et al., 2015).

The network connections enable access to a broad range of new concepts, tips, knowledge and data (Stam, 2010). Strong associations form a "sensor" for detecting and sourcing material necessary for current activities and long term plans (James, Dennis & Vincent, 2014). When an organization looks to test, optimize, modify, and construct, the intelligence acquired through the external chain of connections (ECTs) and inner cluster ties (ICTs) can be advantageous for the organization's innovative performance (Theresia et al., 2015).

2.7 Network Ties Orientation

When corporate culture promotes engagement with those outside and focuses less on individual partners of the network, a relational network viewpoint can be adopted (Alina & Noshir, 2015). This viewpoint encourages networks that feature dense and related structures, which are made up of a variety of different connections and associations (Pittaway, 2004). Density of the network looks at the ratio of actual links to potential connections and integration looks at the level of communication between the involving partners.

Individuals tend to view themselves more as partners in densely knit and intertwined interactions, pushing aside organizational divisions (Alina & Noshir, 2015). These networks provide the means for exchanging insights, data, and viewpoints through dynamic associations as they bring together diverse alliances and design tasks to grant all participants a distinct yet connected role (Gaudici, 2013).

Utilizing network theory to analyze organizational results has been found to be quite advantageous. Unfortunately, the application of the network model can be tricky when it comes to the assessment of knowledge transfers and modifications. As Gaudici (2013) observed, network links are a combination of direct and indirect connections with a range of external individuals. Pittaway (2004) has discovered that there is a high degree of disagreement and debate in the research literature regarding the proper setup of network ties for increased competition.

This gap of research can be broadened further as existing studies also show opposing opinions on how to ascertain relations within a network, such as between formal and informal, strong and weak ties (Stam, 2010) or customer-focused and supplier-focused ties, as well as intracluster ties (ICT) and extra cluster ties (ECT) (Mulu & Pierre, 2011).

2.8 The Mediating Role of Network Stability

The impact that network development has on the creative advantages of distinct network structure and content has been overlooked in previous works of research on networks and creativity. Even when following a long-term perspective, investigations on imaginative outputs, for example, scholarly works or patents, portray creativity as the total amount of such outputs over a given period of time (Burt, 2004; Fleming et al., 2007; McFadyen & Cannella, 2004). The influence that networks' development has on the creative benefits derived from their unique structures and contents has largely not been taken into consideration in past research regarding networks and inventiveness.

The importance of changes in the network over time when it comes to the inventive results of exclusive network structures and substance has been largely overlooked in existing investigations of networks and creativity. Data and material often assimilate rapidly and bring diminishing returns (Stovel et al., 2011), while mediator positions are unreliable and liable to alteration (Burt & Merluzzi, 2016; Sasovova, Mehra, Borgatti, & Schippers, 2010; Aral & Van Alstyne, 2011).

3.0 METHODS

3.1 Research Design

This research used a descriptive strategy with special focus on organizational creativity, innovation, management, and performance, and evaluated how the strength of network ties moderate these factors. It describes the characteristics of the firms, determining the degree to which a firm’s characteristics differ from one firm to another, using percentages. This method has been successfully used in many studies to identify what particular factors influence particular creativity, innovation, and performance in an institution. The research approach for this study is based strongly on the research question and the intent of the study, as well as the already available literature. This study is not an experiment, but a descriptive survey that looks into the impact of creativity, innovation, and management on the output of educational organizations in Ghana.

3.2 Population

The focus of a study is comprised of individuals, objects, or institutions that are being examined and serve as the subjects to be studied. These entities form the target population, which is the collective collection of all elements, services, gatherings of households, and events that are being studied. For this purpose, the study population was teachers in the Senior High Schools in the Accra Metropolis. There are a total of 11 public Senior High Schools

with a teacher population of about 461 in the Accra Metropolis.

3.3 Sample Size and Sampling procedure

A total of 150 teachers were randomly selected across the 11 public senior high schools to participate in the study. In this study, structured questionnaire was used in addition to the secondary data from published literature, which is intended to strengthen the content of the entire research work. The questionnaire was made using sparse and exact wording to prevent any misunderstandings and also to pique the participant's attention.

Closed-ended questions were designed for the respondents. The questionnaire was designed to capture the critical areas stated in the objectives of the study. The questionnaire was administered with the help of a research assistant.

The questionnaire was tested by 20 teachers from one of the Senior High Schools in the Tema Metropolis to confirm its comprehendibility, steadiness, and suitability. Afterward, the requisite corrections were made and the questionnaires were finalized for the field work.

4. RESULTS

This section presents the results of the data analysis according to the study objectives.

Table 1: Characteristics of Respondents

Characteristics	Frequency	Percentage
Number of years in teaching		
5	24	16.0
6	29	19.3
7	1	.7
8	32	21.3
10	25	16.7
11	9	6.0
12	24	16.0
13	3	2.0
14	3	2.0

The results in table 1 above shows that 16.0% of the teachers had worked for 5 years, 19.3% had worked for 6 years, 0.7% had worked for 7 years, 21.3% had worked for 8 years, 16.7% had worked for 10 years, 6.0% had worked for 11 years, 16.0% had worked for 12 years and 2.0% had worked each for 13 and 14 years.

Table 2: Demographic Characteristics of the respondents

Gender	Frequency	Percentage
Male	109	72.7
Female	41	27.3
Age group		
20-29 years	59	39.3
30-40 years	29	19.3
40-49 years	62	41.3
Level of education		
Diploma/HND	47	31.3
Bachelors	73	48.7
Masters	30	20.0

Of the 150 respondents, 72.1% of them were males and 27.9% were females. Also, 39.7% was aged 20 to 29 years, 19.1% was aged 30 to 40 years and 41.2% was aged 40 to 49 years. Of their level of education, 32.4% had attained diploma or higher national diploma, 41.1% had attained secondary education and related certificates and 20.6% had masters degrees.

Table 3: Descriptive Statistics of study variables

	N	Minimum	Maximum	Mean	Std. Deviation
Creativity	150	4.08	4.58	4.28	.16
Innovation	150	4.17	4.58	4.37	.14
Management	150	3.83	4.83	4.34	.35
Performance	150	2.67	4.50	3.76	.56
Network Ties	150	3.35	4.06	3.72	.16
Valid N (listwise)	150				

In the descriptive statistics, the five variables showed mean values above three. This indicates a strong agreement with the parameters that were used to measure these variables on the Likert 5 point scale.

Table 4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.931	3	9.977	85.505	.000[b]
	Residual	17.036	146	.117		
	Total	46.968	149			

a. Dependent Variable: PERFORMANCE

b. Predictors: (Constant), MANAGEMENT, INNOVATION, CREATIVITY

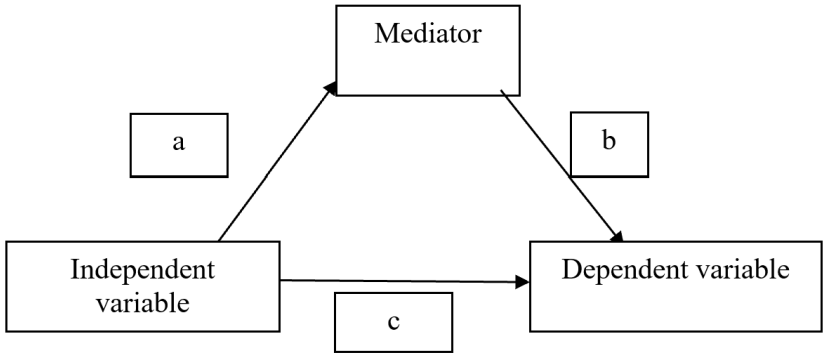
Table 5: Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	10.113	1.643		6.154	.000	13.361	6.865
	Creativity	3.895	.274	.965	14.226	.000	3.354	4.436
	Innovation	.708	.223	.179	3.174	.002	.267	1.149
	Management	1.361	.101	.849	13.492	.000	1.561	1.162

a. Dependent Variable: PERFORMANCE

The results in table 5 above show that creativity, innovation and management all have a significant relationship with performance (p-values<).

Mediation analysis



A linear regression analysis was deployed to measure the impact the independent variable had on the mediating variable. For the model, 'c' represents the direct effects of the independent variable on the dependent variable, while 'a*b' reflects the point of estimate for the indirect effect of the independent variable on the dependent variable through the mediator. The indirect effect was measured by using a percentile bootstrap estimation of 5000 samples applied through the PROCESS macro Version 4.3 beta (Hayes, 2017).

Table 6: The Mediating role of network ties in the relationship between Creativity and Performance

Model : 4
Y : PERFORMANCE
X : CREATIVITY
M : NETWORK TIES

Sample Size: 150

OUTCOME VARIABLE:
NETWORK

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2253	.0507	.0231	7.9106	1.0000	148.0000	.0056

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6453	.3829	6.9093	.0000	1.8887	3.4019
CREA	.2516	.0895	2.8126	.0056	.0748	.4284

OUTCOME VARIABLE:
PERF

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6584	.4335	.1810	56.2338	2.0000	147.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-8.5521	1.2334	-6.9336	.0000	-10.9896	-6.1145
CREA	1.2566	.2572	4.8850	.0000	.7482	1.7649
NETWORK	1.8584	.2303	8.0708	.0000	1.4034	2.3135

DIRECT AND INDIRECT EFFECTS OF X ON Y

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
1.2566	.2572	4.8850	.0000	.7482	1.7649

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
NETWORK	.4676	.0983	.2950	.6845

ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output: 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

The findings showed that creativity was associated with network ties, with a coefficient of 0.25, standard error of 0.09, confidence interval of [0.75,0.43], and p-value of 0.00. Furthermore, network ties also positively impacted performance, with a coefficient of 1.86, standard error of .23, confidence interval of [1.40, 2.31], and p-value of 0.00. Even when accounting for the mediator, network ties, creativity still was correlated with performance, with a coefficient of 1.26, standard error of .26, confidence interval of [0.75, 1.76], and p-value of 0.00.

A percentile bootstrap estimation approach with 5000 samples (using PROCESS macro Version 4.3 beta (Hayes, 2017)) was conducted to assess the indirect effect; results demonstrated that the indirect coefficient was significantly high, with B = 1.26, SE = 0.23, and 95%CI[0.75,1.76]. Performance scores were approximately 4.7 points higher when network ties positivity was taken into consideration.

Table 7: The mediating role of network ties in the relationship between innovation and performance

Model : 4
Y : PERFORMANCE
X : INNOVATION
M : NETWORK TIES

Sample Size: 150

OUTCOME VARIABLE:
NETWORK

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6186	.3827	.0150	91.7443	1.0000	148.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	6.6787	.3089	21.6213	.0000	6.0683	7.2891
INNO	.6762	.0706	9.5783	.0000	.5367	.8157

Covariance matrix of regression parameter estimates:

	constant	INNO
constant	.0954	.0218
INNO	.0218	.0050

OUTCOME VARIABLE:
PERF

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6166	.3802	.1980	45.0784	2.0000	147.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	10.5264	2.2888	4.5990	.0000	15.0497	6.0032
INNO	.9887	.3265	3.0283	.0029	.3435	1.6338
NETWORK	2.6713	.2987	8.9440	.0000	2.0811	3.2616

Covariance matrix of regression parameter estimates:

	constant	INNO	NETWORK
constant	5.2388	.6906	.5958
INNO	.6906	.1066	.0603
NETWORK	.5958	.0603	.0892

DIRECT AND INDIRECT EFFECTS OF X ON Y

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.9887	.3265	3.0283	.0029	.3435	1.6338

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
NETWORK	1.8063	.3418	1.2043	2.5770

ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output: 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

Innovation had a substantial impact on network ties, being a 0.67 coefficients with 0.07 standard error, 95%CI[0.82, .053] and a P value of .00. Network ties were a significant contributor to performance, being a 2.67 coefficient with 0.30 standard error, 95%CI[2.08,3.26], p = 0.00. When accounting for network ties, innovation was still a significant influence on performance, with a .99 coefficient, 0.33 standard error, 95%CI[.34,1.63], and a P value of 0.00.

The study found that the relationship between innovation and performance scores was moderately increased by having positive network ties, with a significant coefficient of 1.81, a standard error of .34, and a 95% confidence interval of the range from 1.20 to 2.58.

Table 8: The Moderating role of Network ties in the relationship between management and Performance

```
 Model  : 4
   Y  : PERFORMANCE
   X  : MANAGEMENT
   M  : NETWORK TIES

Sample Size:  150

OUTCOME VARIABLE:
NETWORK

Model Summary
       R        R-sq       MSE         F         df1        df2          p
    .5902      .3484      .0158    79.1248    1.0000   148.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    4.8573      .1281    37.9193      .0000     4.6042     5.1105
MANAGE       .2618      .0294     8.8952      .0000      .2037      .3200

Covariance matrix of regression parameter estimates:
          constant     MANAGE
constant      .0164     -.0038
MANAGE        .0038      .0009

OUTCOME VARIABLE:
PERF

Model Summary
       R        R-sq       MSE         F         df1        df2          p
    .5861      .3435      .2098    38.4546    2.0000   147.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant   -4.9448     1.5262    -3.2400      .0015    -7.9610    -1.9287
MANAGE       .0887      .1327      .6687      .5047      .1735      .3510
NETWORK     2.2299      .2992     7.4533      .0000     1.6387     2.8212

Covariance matrix of regression parameter estimates:
          constant     MANAGE    NETWORK
constant     2.3293     -.1636     -.4348
MANAGE        .1636      .0176      .0234
NETWORK       .4348      .0234      .0895

DIRECT AND INDIRECT EFFECTS OF X ON Y

Direct effect of X on Y
    Effect         se          t          p       LLCI       ULCI
     .0887      .1327      .6687      .5047     -.1735      .3510
Indirect effect(s) of X on Y:
         Effect    BootSE   BootLLCI   BootULCI
```


NETWORK .5839 .0965 .7813 .3988

ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output: 95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

*MSE-Mean Standard Error
*LLCI-Lower Limit Confidence Interval
*ULCI- Upper Limit Confidence Interval

It was found that management was positively and significantly correlated with network ties (B = 0.26, SE = 0.03, 95%CI[0.20,0.32], p = .0.00). Additionally, network ties had a significant link to performance (B = 2.23, SE = .30, 95%CI[1.64, 2.82], p = 0.00). However, when controlling for the presence of network ties, management no longer had a significant contribution to performance (B = 0.09, SE = .13, 95%CI[0.17,0.35], p = 0.50).

The findings suggested that network ties positivity had a significant influence on performance scores, with an indirect coefficient of 1.81 (Standard Error = .34, 95%Confidence Interval [1.20,2.58]). This meant that innovation was linked to an average of 2.2 point increase in performance measures.

4.0 Discussion of Results

The study found that creativity, innovation and management have positive significant relationship with performance in the educational enterprise (p-values<0.05). When education management are more creative and apply new innovations in their management, it results in better performance of the education enterprise. Innovation, creativity, and good management help all organizations gain a competitive advantage by anticipating and meeting consumer wants while also making use of technology. Baykal (2018) also indicates that creativity and innovation also contribute to the long-term profitability and performance of all kinds of businesses.

Network ties did not have a much effect on the relationship between creativity and innovation, and performance. However, network ties significantly mediated the relationship between management and performance. Although managers have creative and innovative skills to impact performance, their management abilities still requires both internal and external networking with other institutions or individuals to ensure performance. Innovation is aided by new connections, experiences gained from travel to other fields or locations, and active and collegial networks. Through networks, ideas, information, and opinions can move through quickly changing connections, thanks to the establishment of short-term working alignments and implementation of processes that leaves collaborators with varying and interconnected responsibilities. This is in agreement with Stam's (2010) statement that access to varying ideas, knowledge, references, and data is enabled by networking.

5.0 Conclusion

There is a significant relationship between innovation, creativity and management, and performance in the educational enterprise. Leadership of education who are the managers of that enterprise can employ more creative and innovative ways to achieve better performance of the education enterprise. Innovation, creativity, and good management help all organizations gain a competitive advantage by anticipating and meeting consumer wants while also making use of technology.

In order to optimise results, education managers should build a strong network of contacts with other groups and individuals. This will help the exchange of ideas, data and perspectives between organisations through the formation of temporary teams and assigning roles and responsibilities in ways that keep differents acts interlinked.

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