



Structural Model of Principals' Innovative Leadership Attributes on Managerial Creativity

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DOI: <https://doi.org/10.30880/ijscet.2020.11.02.017>

Received 30 July 2020; Accepted 30 August 2020; Available online 02 September 2020

Abstract: UAE educational institutions had being underpinned and characterized by a series of challenges such as weak student achievement, inadequate levels of education, insufficient number of teachers, poor school management and lack of professionalism. Also the schools in the UAE continue to be plagued with poor infrastructure and organizational culture. This research was conducted to determine factors affecting the principals' innovative leadership attributes on managerial creativity in UAE. A total of 230 questionnaires were distributed out of which 167 (72.3%) were successfully retrieved. The data collected were Analysis of Moment Structures Equation Modelling (AMOS-SEM). The structural model was developed based on 8 groups of factors that affecting the managerial creativity of the educational institutions which are: innovative leadership attributes; risk tolerance; domain expertise; openness; emotional stability; confidence; action oriented and professional development. The developed model was statistically validated as it achieved all the criteria of goodness of fit. Beside that all the hypotheses are significant meaning that the eight groups have significant impact to the managerial creativity. Hopefully if the model is implemented persistently, it is believed to be able to improve the managerial creativity in the UAE. Any attempt to improve professional development in the relationship between the creative leadership qualities of principals and managerial innovation in the UAE it good to refer to this model.

Keywords: UAE, Education, Teachers, Schools and SEM

1. Introduction

Educational institutions in the United Arab Emirates has been underpinned and characterized by a series of challenges. These challenges have been reported in the literature to include inadequate curricula, low student achievement, inefficient teaching standards, and insufficient number of Emirati teachers, poorly trained school management and a lack of professionalism. Also report that schools in the UAE continue to be plagued with poor infrastructure and organizational culture (Litz & Carroll, 2016). To mitigate these challenges and revamp the instructional machine in the UAE specifically in areas of college management and leadership, the Abu Dhabi Education Council has begun predominant reforms (Stringer & Hourani, 2016). These reforms have considered the institution and enactment of new roles and obligations for principals framed via the expert standards developed by means of ADEC. Since principals have been diagnosed as a catalyst for change in efforts to acquire two these awful lot favored upgrades in the educational machine of the UAE, expert improvement and education are being supplied to school principals. The Abu Dhabi Education Council explains that this cross is a concerted effort to empower principals to enact the preferred adjustments and get to the bottom of the many challenges associated with the education sector in the UAE, especially in improving standard college overall performance (Council, 2012).

Principals in the UAE have seen their roles and obligations in the administration of colleges improved as an end result of the introduction of the New School Model (NSM) by using the Abu Dhabi Education Council (ADEC). In addition to this, ADEC has additionally brought the Principal Professional Standards and Performance Evaluation which has additionally conceptualized the obligations of school principals. Furthermore, the Abu Dhabi Education Council has reiterated its mandate in revolutionizing its educational device and making it one of the quality instructional systems in the world thru curricular, pedagogical and school leadership reforms. This implies that school principals wished to become creative managers and modern leaders to carry to fruition the mandate of the Abu Dhabi Education Council (Alsolami, Cheng & Twalh, 2016, Stringer & Hourani, 2015, Kanaan, 2008 & Council, 2012).

2. Review of Literature

In the cutting-edge transformation taking place across instructional institutions over the world, school principals are confronted with a greater difficult function of effecting innovative practices within faculties to affect school performance, improve instructing and gaining knowledge of experiences which therefore have an impact on scholar performances and outcomes (Council, 2012 & Elrehail *et al.*, 2018). In endorsing innovative and revolutionary college reforms, principals have been placed as catalysts to initiate school improvements and improving the roles and duties spelt out via the new overall performance standards (Council, 2012). In attaining these, the Abu Dhabi authorities has ensured that professional improvement for principals is undertaken to assist them in correctly grasp and disseminating new roles and responsibilities. But the query becomes, does appreciation one's roles and duties propel creativity and innovativeness? This in addition raises every other question, does expert development and training equip principals with managerial creativity and progressive management attributes wished to impact improvements within schools? In response to these questions, Stringer and Hourani (Stringer & Hourani, 2016) explains that the expectation for principals to change, innovate and conform to the new performance requirements framed by means of ADEC solely increases the stress to regulate and boost leadership capabilities that are more inclusive and informed by experience and practice.

Anand & Saraswati, (2014) explains that innovation management entails synthesizing exclusive management patterns in companies to impact personnel to produce creative ideas, products, offerings and solutions. Further explains that it is a method that entails three tiers of thought generation, contrast and implementation. These definitions and descriptions of innovation management depict a leader's ability in coordinating all resources inside the organization, to create, enhance and enforce ideas that can revolutionize the organization. When principals lead with innovation, they can imbue an innovative culture, direct the school with without a doubt noted visions and goals, construct have confidence with teachers, foster wonderful communication as well as give room for experimenting new ideas.

Managerial creativity on the other hand is a leader's capacity to unleash the power of the mind in conceiving new ideas in both themselves and in their subordinates Hornák, Cagaňová & Čambál (2012). According to Somsing & Belbaly, (2017), managerial creativity is an indispensable skillset that managers need to make strategic decisions. School managers (principals) require this skillset to lead schools strategically to reach performance levels according to set standards by ministries of education or related boards. Some scholars have mostly equated creativity with innovation, but researchers (Agbor, 2008) have argued that although creativity and innovation are complimentary, they essentially do not mean the same thing. While the former entails the generation of possible ideas as solutions to a specific issue, the latter entails, implementing the best idea as a solution to a specified problem.

Gkorezis (2016) explored the mediation and moderated effect of primary empowering management and trainer revolutionary behavior. They found that exploration mediates the relationship between important empowering management and instructor progressive behavior and that this indirect effect is based on position conflict. Orphanos and Orr (2014) additionally explored the moderating impact of leadership practice on management practices and teachers' job collaboration, management and satisfaction. Findings revealed that innovative management coaching exerts an extensive direct impact on principal's management practices and an oblique effect on trainer collaboration and satisfaction. These researches expose foundational attempts to discover the role of professional improvement and education in fostering the improvement of creativity and innovation. Their problem only exists in the use of an extra focused depiction of leadership styles. Perhaps a wider concept of revolutionary management and managerial creativity fashions may also alter this effect.

Hence, this find out about will discover the role of modern management fostered thru expert improvement in attaining managerial creativity amongst the principals of Abu Dhabi schools. Undertaking this study is especially necessary as it will grant a medium to discover the relationships between principal's progressive management attributes their managerial creativity and the expert development application they have undertaken to prepare them for their new roles and obligations in enacting the favored exchange in schools. This will contribute to the extant literature on innovation and creativity in faculties and perhaps supply feedback about extra component that can also be require in the expert improvement principals' in Abu Dhabi need.

The structural model of this study was based on the relationship of eight independent constructs and one dependent construct as in table 1.

Table 1 - The construct and factors of the model

	Independent constructs [affecting managerial creativity]	Number of factors	Dependent construct	Number of factors
1.	Innovative Leadership Attributes	6	Managerial Creativity	6
2.	Risk Tolerance	6		
3.	Domain Expertise	6		
4.	Openness	6		
5.	Emotional Stability	4		
6.	Confidence	5		
7.	Action Oriented	4		
8.	Professional Development	4		

3. Methodology

The research approach is purely quantitative where the data was collected through structured questionnaire survey. Purposive and systematic sampling techniques were used and thus, a total of 230 questionnaires were distributed out to the principals of Abu Dhabi schools who are significant to the influential factors. However 167 (72.3%) sets of questionnaires were successfully retrieved. The questionnaire used five (5) point Likert scale because of the anticipated method of data analysis (Structural Equation Modeling AMOS-SEM) due to the fact that most of the questions have to do with attitudinal and perception opinions of people (unobserved data) which are usually prone to error. A structural equation modeling was used to determine the significance factors of innovative leadership attributes in Abu Dhabi schools from the perspectives of the principals and teachers. Before the data being used for the structural modelling, it has passed through various screening stages which included missing data, outlier, reliability test, multicollinearity and confirmatory factor analysis (CFA).

4. Data Analysis and Results

This study was to establish and assess a structural relationship model of factors affecting managerial creativity using SEM AMOS software. The structural equation model based on the conceptual model as Fig 1. The model is divided into two parts: a measurement model and a structural model. The measurement model deals with the relationships between measured variables and construct variables. The structural model deals with the relationships between construct variables only to test the impact of cause-effect relationship.

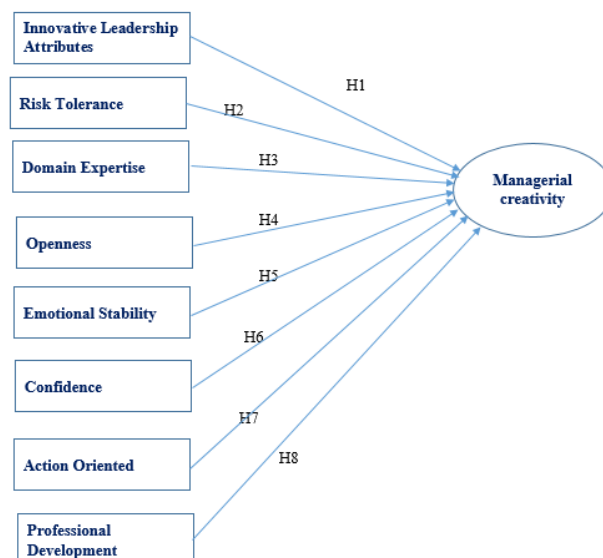


Fig 1 - Conceptual of the structural model

Table 2 outlined the goodness-of-fit indices and level of acceptance used as a guide in the evaluation of the fitness of construct measurement models and structural equation models.

Table 2 - Goodness-of-fit index and level of acceptance

Name	Indexes	Acceptance level	Comments	Literature support
Absolute fit	Chisq	$P > 0.05$	sample size ≥ 200	[21]
Absolute fit	RMSEA	$RMSEA < 0.08$	0.05 to 1.00	[22]
Absolute fit	GFI	$GFI > 0.90$	$GFI = 0.95$ Is a good fit	[23]
Incremental fit	AGFI	$AGFI > 0.90$	$AGFI = 0.95$ Is a good fit	[24]
Incremental fit	CFI	$CFI > 0.90$	$CFI = 0.95$ Is a good fit	[25]
Parsimonious fit	Chisq/df	$Chisq/df < 5.0$	< 5.0	[26]

Since this paper intended to present the structural model only, then it considered that the assessment at measurement level was assumed achieved the threshold values. The next stage of analysis model is the entire constructs into a single structural equation model using Analysis of Moment Structure (AMOS). The reason for the pull out is to display the causal effects between one construct and the other in line with the set hypotheses. The connection between each construct is linked with arrow in the hypotheses' direction according to the conceptual model as figure 1 and as presented in Fig. 2. However, the model was used to analysis the multidirectional relationships within the entire research constructs.

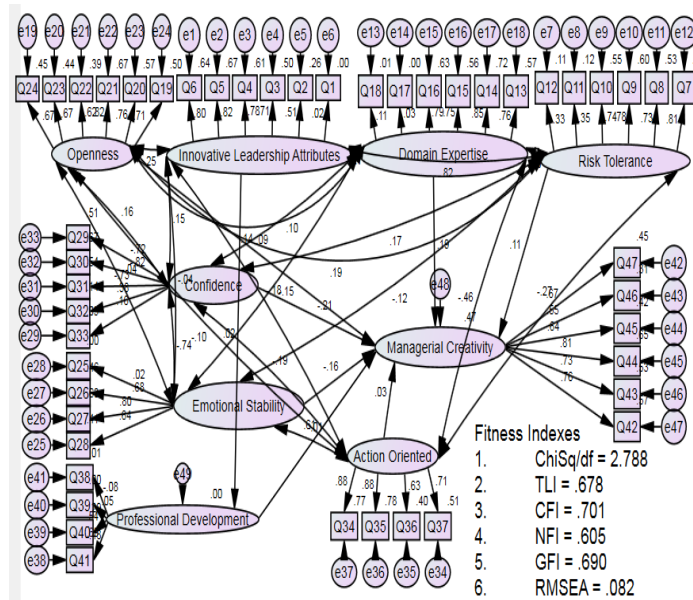


Fig. 2 - Initial structural model performance

As shown in Fig.2 and Table 3 certain fitness indexes for the structural measurement model do not attain the acceptable and required level of goodness-of- fitness indexes (Awang, 2014). The observed factor loadings for the entire constructs were above 0.5, though, fitness indexes were relatively below the recommended level. Therefore, modification indices examined in order to identify redundant items and they were correlated for the improvement of the model's goodness-of-fitness indexes.

Table 3 - Fitness Indices of structural model

Index	Threshold value	Score Value	Achievement of the required level
Chisq/df	$Chisq/df \leq 3$	2.788	Achieved
TLI	$TLI \geq 0.9$ means satisfactory	0.678	Not achieved
CFI	$CFI \geq 0.9$ means satisfactory fit.	0.701	Not achieved
NFI	$NFI \geq 0.80$ suggests a good fit	0.605	Not achieved
GFI	$GFI \geq 0.80$ suggests a good fit.	0.690	Not achieved
RMSEA	$RMSEA \leq 0.08$ mediocre fit.	0.082	Achieved

Model is not accepted

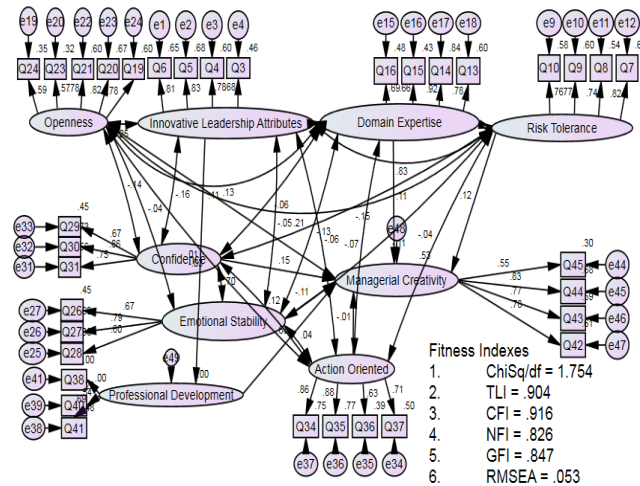


Fig.3 - final structural model performance

Fig.3 shows the final structural model with acceptable level of goodness-of-fitness as in table 4. It shows the analysis of the causal effect (impact) for the multiple constructs in the path diagram. The standard regression weights indicated the estimate of beta coefficient which measures the impacts of the main constructs; exogenous variables on the intervening variable and endogenous variable (Managerial Creativity). While the fitness indexes for the structural model which reflect how fit is the hypothesized model with the data at hand was observed and satisfactory within the established acceptable level of goodness of fitness indexes (Awang, 2015 & Hair, Ringle & Sarstedt, 2011).

Table 4 - Fitness Indices of structural model

Index	Threshold value	Score Value	Achievement of the required level
Chisq/df	$Chisq/df \leq 3$	1.754	Achieved
TLI	$TLI \geq 0.9$ means satisfactory	0.904	Achieved
CFI	$CFI \geq 0.9$ means satisfactory fit.	0.916	Achieved
NFI	$NFI \geq 0.80$ suggests a good fit	0.826	Achieved
GFI	$GFI \geq 0.80$ suggests a good fit.	0.847	Achieved
RMSEA	$RMSEA \leq 0.08$ mediocre fit.	0.053	Achieved

Model is accepted

4.1 Path Analysis

Bootstrapping method was used to conduct the path analysis on the relationship between the four exogenous (independent) constructs and the endogenous (dependent) construct. The bootstrapping method involved re-sampling of the working data set between 500 and 1000 times of the sampling distribution from which the total effect estimates and the corresponding 95% confidence interval values are produced. The results of this analysis are outlined as in table 5 for every respected path in the structural model.

Table 5- Hypotheses of the path analysis

	Hypothesis of the model	P-value	Result
H1	Innovative Leadership Attributes has significant relationship with Managerial Creativity.	***	Supported
H2	Risk Tolerance has significant relationship on Managerial Creativity	***	Supported
H3	Domain Expertise has significant relationship with Managerial Creativity	***	Supported
H4	Openness has significant relationship with Managerial Creativity.	0.001	Supported
H5	Emotional Stability has significant influence on Managerial Creativity.	0.031	Supported
H6	Confidence has significant relationship with Managerial Creativity.	0.064	Not Supported
H7	Action Oriented has significant relationship with Managerial Creativity.	0.082	Not Supported
H8	Professional Development has significant relationship with Managerial Creativity.	***	Supported

###* represents P-value is less than 0.001

Based on the results in table 4, all the paths' relationship with managerial creativity are significant however only confidence and action oriented paths are not significant. This finding can be adopted to strategies improvement mechanism of managerial creativity.

5. Conclusion

This study has managed to present the model development and assessment of relationship between factors affecting managerial creativity among the principal of the education sector of UAE. The structural model comprises of eight independent construct of factors and one dependent construct of factors. The model was assessed statistically and finally complied with all the criteria, thus the model was validated. In term of path analysis which is the hypothesis testing, all the hypotheses are significant except only confidence and action oriented paths are not significant. Hopefully with the establishment of this model it will assist the educational community to improve the managerial creativity among the education authority for further improvement.

Acknowledgement

The authors would like to thank the Universiti Tun Hussein Onn Malaysia for supporting this research work.

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