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The Development of a Strategic Leadership Competency Measure for Public Sector Leaders – A Pilot Study

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Abstract: Leaders play an important role in the strategic operation of any organisation. This requires skilled and competent individuals who can add value to a dynamic, changing work environment. Despite inroads made by research on strategic leadership competencies, measures of these competencies remain scant. The main objective of this research was to develop and pilot test a strategic leadership competency measure for public sector leaders in South Africa. A quantitative research approach was followed, using the steps of the DeVellis's scale development process. A Strategic Leadership Competence Measure was developed and piloted among strategic leaders in five public sector institutions ($N = 168$). Exploratory factor analyses resulted in three distinguishable competency dimensions for strategic leaders: *Affective* (with the factors of Internalising, Influencing, and Awareness); *Cognitive* (with the factors of Strategic business intelligence, Prudence, and Applying); and *Psychomotor* (Complex overt response, Modus, and Guided response). All factors showed excellent reliabilities. This study contributed a new measurement of strategic leadership competencies. The measure can be applied to assess the current competence of public sector leaders, and can be used to determine corrective action where necessary. Recommendations are made.

Keywords: *Affective, Cognitive, Psychomotor, Public sector institutions, Strategic Leadership*

Introduction

The public sector did not escape the rapid changes that came with the democratisation of South Africa during the nineties (Mokgolo, Mokgolo & Modiba, 2012). All these changes contributed to a dramatic increase in the complexity of South African public institutions (Chipunza & Gwarinda, 2010). Consequently, there is a greater demand on effectiveness and efficiency of public sector service delivery, which is a fundamental part of the strategic leadership function (Siswana, 2007). Effective strategic leadership can enhance organisational performance while competing in turbulent and unpredictable environments (Lear, 2012). Therefore is imperative that leaders are competent, in other

words have the necessary knowledge, skills and attitude to manage change effectively in the public sector (Mahembe & Engelbrecht, 2013).

This research focused on the development of a strategic leadership competency measure for strategic leaders within the South African public sector. Despite inroads made by research on strategic leadership competencies, measures of these competencies remain scant. The need for leadership competency assessments is further amplified by the fact that the leadership and governance framework of the South African public service has a negative impact on its effectiveness and efficiency (Naidoo, 2005). According to Markus, Thomas, and Allpress, (2005, p. 117) competencies are defined “based on functional role analysis and described either role outcomes or knowledge, skills, and attitudes or both ... and assessed by a behavioral standard.” Kochanski (2009) defined competencies as success factors that enable assessment, feedback, development, and reward of individuals.

In lieu of the above, the study was designed to identify and assess the strategic leadership competencies as depicted by Bloom (1956). Bloom (1956) classified strategic leadership competencies into three large groups called the domains of learning: a. Cognitive (thinking) b. Affective (feeling) c. Psychomotor (doing). Affective competencies refer to the ability of public sector leaders to recognise and manage the emotions and feelings of subordinates during times of fast systematic workplace changes (Kotze & Nel, 2015). Cognitively, public sector leaders need to collect, interpret, generate and evaluate the information that guides their strategic thinking and shape the organisation’s sustainable competitive advantage (Geldenhuis & Veldsman, 2011). Psychomotor competencies can be seen as those abilities which allow for effective interaction between the strategic leadership cognitive job knowledge and the subsequent execution thereof in the workplace (Tan, 2006). Strategic leaders need these competencies to perform successfully in their newly appointed strategic leadership positions.

The descriptions of the dimensions of the three strategic leadership competency domains are presented in Table 1 below:

Table 1: Descriptions of strategic leadership competency dimensions

DIMENSION & FACTORS	DESCRIPTION
AFFECTIVE COMPETENCY DOMAIN	
Communicating with Flexibility	Awareness, willingness to hear, selected attention.
Active Participating	Attends and reacts to a particular phenomenon.
Political Awareness	Reading the group's emotional cues and power relationships.
Organizing and Influencing	Exercising of effective strategies for persuasion.
Internalising	Adopt belief system and philosophy.
COGNITIVE COMPETENCY DOMAIN	
Remembering	Recalling relevant information
Understanding	Explain ideas or concepts
Applying	Utilise broad range of ideas and practices, thinking logically and creatively

Analysing	Distinguish between different parts
Evaluating	Revise strengths and weaknesses of internal environment
Creating	Create new product or point of view
PSYCHOMOTOR COMPETENCY DOMAIN	
Perception	The ability to use sensory cues to guide motor activity. .
Readiness to Act	Includes mental, physical, and emotional sets that pre-determine a person's response to different situations
Guided Response	The early stages in learning a complex skill that includes imitation and trial and error.
Mechanism	Intermediate stage in learning a complex skill.
Complex Overt Response	Proficiency is indicated by a quick, accurate and highly coordinated performance, requiring a minimum of energy.
Adaptation	Skills are well developed and the individual can modify movement patterns to fit special requirements.
Origination	Creating new movement patterns to fit a particular situation or specific problem.

Methodology

A quantitative research approach was followed. A cross-sectional survey design was used to collect data and attain the research goals (Field, 2009). The present research mostly followed the DeVellis scale development process (DeVellis, 1991).

Sampling

The sample included strategic leaders that represented five major central South African government institutions. A total of 550 questionnaires were administered to senior management of the five mentioned institutions. A total of 168 questionnaires were returned which represent 30.55% response rate. Most of the respondents were male (57.7%) and representative of the black ethnic group (54.2%). The respondents were primarily employed as directors (47%) and with a national diploma as their highest level of qualification (32.7%). Most of the respondents' was speaking indigenous languages (39.29%) as their home language.

Measuring Instrument

A questionnaire was developed based on a thorough document analysis and an extensive literature review. Item generation was based on the theoretical relationships between constructs. A total of ten questionnaires were pretested using subject-matter experts. Revisions were made based on the recommendations of these experts. This ensured the content validity of the questionnaire. The questionnaire consisted of the following three sections which measured the three competency domains for strategic leadership: Affective, Cognitive and Psychomotor.

The *Affective competency domain* of the questionnaire consisted of 21 items and measured five dimensions: Communicating with flexibility, Active Participating, Political Awareness, Organising and Influencing and Internalising. The *Cognitive competency*

domain of the questionnaire consisted of 20 items and measured six dimensions: Remembering, Understanding, Applying, Analysing, Evaluating and Creating. The *Psychomotor competency domain* of the questionnaire consists of 29 items and measure seven dimensions: Perception, Readiness to Act, Guided Response, Mechanism, Complex Overt Response, Adaptation and Origination.

The questionnaire uses a dual scale. Respondents are first required to indicate the extent of their agreement with each statement on a five-point Lickert-type scale ranging from very dissatisfied (1) to very satisfied (5). Respondents are secondly required to indicate the importance of the strategic leadership practices from Not Important (1) to Very Important (5).

Statistical Analyses

Statistical analysis was carried out using the SPSS Program (SPSS Inc, 2016). The reliability and validity of the Strategic Leadership Competency Measure was determined by means of exploratory factor analysis and Cronbach alpha coefficients. Univariate analyses of variances were used to test for significant differences between the current demonstration and the importance of strategic leadership competencies. Effect sizes (Field, 2009) were used to decide on the practical significance of the findings. Cohen's (1988) guidelines for the interpretation of effect sizes: 0.0099 constitutes a small effect, 0.0588 a medium effect and 0.1379 a large effect was used.

Results and Discussion

The KMO analyses showed the following measures of sampling adequacy: *Affective Domain* — .954, *Cognitive Domain* — .952, and *Psychomotor Domain* — .963. These results were acceptable according to the guideline of a KMO higher than 0.6 being adequate for factor analysis (Hair, Black, Babin, & Anderson, 2010). The results of the factor analyses are reported next.

Factor analyses - Affective Domain: Exploratory factor analyses using Principal Axis Factoring analyses were done on the 21 items of the Affective competencies measure. The initial analyses showed three distinctive factors. Principal Axis Factoring analyses were done using Varimax rotation to specify the three factors. The analyses resulted in three factors which explained 92.979% of the variance. The three factors were labelled: Internalising (Factor 1), Influencing (Factor 2) and Awareness (Factor 3). The results of the rotated factor matrix are reported in Table 2 below.

Table 2: Rotated Factor Matrix of the Affective Competency Scale

	Internalising	Influencing	Awareness
AF1	.661	.499	.460
AF2	.543	.436	.670
AF3	.524	.630	.425
AF4	.463	.720	.417
AF5	.586	.612	.478
AF6	.777	.434	.392
AF7	.679	.384	.565
AF8	.786	.407	.382

AF9	.347	.676	.606
AF10	.728	.470	.463
AF11	.534	.425	.697
AF12	.511	.673	.450
AF13	.741	.464	.416
AF14	.509	.709	.438
AF15	.501	.409	.732
AF16	.723	.468	.456
AF17	.399	.558	.667
AF18	.675	.488	.490
AF19	.642	.532	.455
AF20	.623	.608	.428
AF21	.601	.677	.314

Factor analyses - Cognitive domain: Exploratory factor analyses using Principal Axis Factoring analyses were done on the 20 items of the Cognitive Domain measure. The initial analyses showed three distinctive factors. Principal Axis Factoring analyses were done using Varimax rotation to specify the three factors. The analyses resulted in three factors which explained 92.548% of the variance. The three factors were labelled: Strategic Business Intelligence (Factor 1), Prudence (Factor 2) and Applying (Factor 3). The results of the rotated factor matrix are reported in Table 3 below.

Table 3: Rotated Factor Matrix of the Cognitive Competency Scale

	Strategic Business Intelligence	Prudence	Applying
CO1	.644	.360	.577
CO2	.494	.417	.741
CO3	.450	.759	.356
CO4	.710	.454	.458
CO5	.765	.438	.416
CO6	.630	.624	.299
CO7	.727	.467	.405
CO8	.412	.779	.412
CO9	.741	.483	.420
CO10	.426	.807	.349
CO11	.769	.446	.416
CO12	.526	.489	.647
CO13	.692	.575	.323
CO14	.429	.593	.594
CO15	.596	.453	.612
CO16	.596	.507	.535
CO17	.753	.430	.446

CO17	.705	.429	.446
CO19	.751	.450	.448
CO20	.679	.470	.481

Factor analysis - Psychomotor domain: Exploratory factor analyses using Principal Axis Factoring analyses were done on the 29 items of the psychomotor competencies measure. The initial analyses showed three distinctive factors. Principal Axis Factoring analyses were done using Varimax rotation to specify the three factors. The analyses resulted in three factors which explained 92.979% of the variance. The three factors were labelled: Complex overt response (Factor 1), Modus (Factor 2) and Guided Response (Factor 3). The results of the rotated factor matrix are reported in Table 4 below.

Table 4: Rotated Factor Matrix of the Psychomotor Competency Scale

	Complex Overt Response	Modus	Guided Response
P1	.666	.528	.437
P2	.518	.677	.429
P3	.628	.437	.598
P4	.738	.403	.501
P5	.524	.470	.651
P6	.765	.404	.383
P7	.476	.610	.561
P8	.761	.436	.400
P9	.619	.437	.605
P10	.741	.515	.314
P11	.780	.428	.389
P12	.561	.515	.583
P13	.511	.473	.656
P14	.388	.679	.578
P15	.709	.466	.437
P16	.648	.445	.567
P17	.499	.712	.373
P18	.521	.476	.584
P19	.574	.439	.643
P20	.579	.665	.320
P21	.637	.413	.591
P22	.415	.767	.439
P23	.380	.602	.578
P24	.401	.742	.483
P25	.495	.685	.400
P26	.369	.636	.631
P27	.532	.744	.324
P28	.555	.540	.533
P29	.470	.541	.631

The descriptive statistics and reliabilities of the factors of the Strategic Leadership Measure are reported in Table 5 below. The results show excellent reliabilities for all factors of the Strategic Leadership Competency Measure according to the guidelines of $\alpha \geq 0.70$ (Field, 2009). From the mean scores it is evident that the respondents perceived that public sector leaders displayed below average competencies in all factors except for Prudence and Modus.

Table 5: Descriptive statistics and reliabilities for the Leadership Competency Measure

	Mean	SD	Skewness	Kurtosis	α
Affective Domain	2.8166	.87130	.128	-.283	.981
Internalising	2.6982	.88675	.202	-.113	.991
Influencing	2.9162	.86489	-.015	-.072	.984
Awareness	2.8353	.91168	.332	-.290	.979
Cognitive Domain	2.9403	.83739	.028	-.100	.967
Strategic Business Intelligence	2.8908	.82928	.074	-.036	.992
Prudence	3.2535	.86057	-.325	-.185	.976
Applying	2.6766	.90319	.339	-.194	.977
Psychomotor Domain	2.9942	.82752	.008	.099	.981
Complex Overt Response	2.8553	.87603	.100	-.069	.991
Modus	3.1551	.86781	-.069	-.058	.989
Guided Response	2.9721	.78295	-.016	.438	.981

Next univariate analyses were performed to determine whether significant gaps exist between the current versus the importance of the dimensions and factors of the Leadership Competency Measure. The results revealed that significant gaps exist between the current demonstrations of the three competency domains and its factors by business leaders versus the importance thereof. All the effects were medium. The results are reported in Table 6 below.

Table 6: Current display versus the importance of Strategic Leadership Competencies

Factors	Mean		Gap	p	Eta
	Current	Importance			
Affective Domain	2.817	4.571	-1.755	.000	.935
Internalising	2.698	4.557	-1.859	.000	.858
Influencing	2.916	4.535	-1.618	.000	.854
Awareness	2.835	4.621	-1.786	.000	.648
Cognitive Domain	2.940	4.606	-1.666	.000	.992
Strategic Business Intelligence	2.891	4.561	-1.670	.000	.911
Prudence	3.253	4.653	-1.399	.000	.764
Applying	2.677	4.605	-1.928	.000	.762
Psychomotor Domain	2.994	4.605	-1.610	.000	.934
Complex Overt Response	2.855	4.595	-1.740	.000	.866
Modus	3.155	4.621	-1.465	.000	.786

Guided Response	2.972	4.598	-1.626	.000	.751
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Conclusions

The main objective of this research was to develop and pilot test a strategic leadership competency measure for public sector leaders. The competency measure revealed three distinguishable strategic leadership competencies: Affective, Cognitive and Psychomotor. The results furthermore showed that the current leadership competencies of public sector leaders needs improvement (Naidoo, 2005). No public service institution will remain sustainable without skilled and competent leaders (Lear, 2012). The results also showed a significant disconnect between the current display and importance of strategic leadership competencies.

The present research makes important theoretical, methodological, and practical contributions. From a theoretical perspective, this study adds to the limited empirical knowledge that exists on Strategic Leadership Competencies in the South African workplace. This research also contributes the clustering and refining of key leadership competencies, to provide a more holistic and condensed approach to strategic leadership. Methodologically, this research introduces a new and reliable strategic leadership competence measure that can be used to public sector leadership competence in the workplace. Public sector leaders can therefore use this measurement as a basis to improve leadership competencies and subsequent service delivery.

This research has some limitations. First, a cross-sectional research approach was followed, which limited making inferences about cause and effect over the long term. A longitudinal study will assist in tracking the importance of strategic leadership competencies over the long term, and make these applicable to current business needs. The considerable lack of empirical studies on strategic leadership competencies and the divergent opinions made the interpretation of the results difficult. For future research, it is recommended that the sample size be increased, to allow for further validation of the instrument. The instrument should also be tested in specific industries, to enhance the effective application of strategic leadership and responsibilities in multiple domains.

In conclusion, this research proved the preliminary utility of a strategic leadership competency measure for public sector leaders in the South African context. We believe that this measure will make a valuable contribution towards enhancing strategic leadership competence and improved public sector service delivery to the multiple stakeholders.

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