

Determining the level of creative thinking skills of small and medium enterprises' owners in South Africa

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Abstract

Small and medium enterprises (SME) need to have a good understanding of how to manage and run a business effectively. Managerial cognitive competencies become vital in handling business, and creative thinking is one of them. Creative thinking is an important cognitive competency that impacts the expansion and survival of small and medium enterprises (SMEs). Very few studies in South Africa investigated SME longevity where creative thinking skills were considered a factor. Therefore, the objective of this study was to determine the level of creative thinking skills among SME owners in South Africa. This was a cross-sectional study conducted among 204 SME owners who were selected using quota sampling from the construction and manufacturing sectors. Data were collected using a self-administered, anonymous online questionnaire and analysed using SPSS software version 27. The overall SME business owners' score for creative thinking skills is 80.36%. This shows that the overall SME owners' creative thinking was moderate for both the manufacturing and construction sectors in South Africa. Thus, it is recommended that for SMEs to optimize their competitive advantage and sustainability, they should employ their creative thinking skills. SME owners, therefore, need to embed creative thinking in their management skills to address complex problems.

Keywords: Creative thinking, SME Management, Longevity, Competency, Entrepreneurial skills, Management

1. Introduction

One of the most important skills for any business manager to possess is creative thinking. This is because changes become a constant element of the daily lives of most managers and business owners. The ability to think strategically and solve problems is vital for managing smaller businesses. Managerial cognitive competencies describe a set of skills that allow an individual to understand the knowledge and abilities necessary for performing a specific task or activity within a specific function or job (Nirachon et al., 2007). These skills are important to the success and survival of small businesses. The problem is that very few studies in South Africa investigated SME longevity where creative thinking skills were considered a factor. Therefore, the reviewed literature revealed that creative thinking is a cognitive competency that is likely to be one of the factors needed by SME owners to effectively manage their businesses.

Thus, the aim of this study was to determine the level of creative thinking skills of SME business owners in South Africa.

2. Literature Review

2.1 Creative thinking

Today's economic situation and saturated markets have forced managers to start thinking differently. According to Smith (2014), managers must have the dynamic capability to manage the different sources and resources of creativity and innovation that surround the organization and the speed to understand and solve internal and external issues. Therefore, creativity is an essential human resource in all organizations (Barron, 1988) and, together with cognitive ability, is critical to problem-solving. Fields and Bisschoff (2014) maintain that creative thinking and creative abilities are increasingly used to solve problems affecting human progress and survival. In addition, Fields and Bisschoff (2014) added that creativity played a crucial role in innovation and problem-solving. Also, creativity is defined as the ability to respond adaptively to the needs for new approaches and new products, as well as the ability to bring something new and valuable into existence purposefully (Barron, 1988).

According to Allen (2012:47), creativity plays a vital role in invention, innovation, and problem-solving. And therefore, it shows that creativity plays a critical role in solving complex problems and coming up with new solutions and inventions. And it is a cognitive ability that is critical to problem-solving, so managerial cognitive abilities play an important role for people looking after organizations.

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2.2 Managerial cognitive ability

Helfat and Peteraf (2015) introduced the concept of "managerial cognitive capability," which highlights the fact that capabilities involve the capacity to perform not only physical but also mental activities. Managerial cognitive capability is the capacity of an individual manager to perform one or more of the mental activities that comprise cognition (Helfat and Peteraf, 2015). Such capabilities provide a foundation for management to seize opportunities and respond to emerging threats. Moreover, managers with cognition capabilities can compile accurate analysis that impacts predictions and performance (Caughron et al., 2013; Partlow et al., 2015). Cognitive ability can also help business owners structure business concepts and strategies and improve organizational performance (Kor and Mesko, 2013). Thus, managerial cognitive competencies are vital for addressing the challenges common to most SMEs and are a critical factor contributing to the performance and survival of small-scale businesses. This study then perceives creative thinking, as a cognitive ability required by SME managers to solve complex problems.

2.3 Managerial cognitive ability: Creative thinking

An individual's cognitive ability provides the foundation for his or her innovative capabilities. Such cognitive abilities include creative thinking. (Mayfield, 2011). Furthermore, creative thinking and creative abilities are increasingly being used in finding solutions to problems that impact human progress and survival (Fields and Bisschoff, 2014). In terms of business management, the ability to create something novel and appropriate, creativity is essential to the entrepreneurship that gets new businesses started and sustains the best companies after they have reached a global scale (Amabile and Khaire, 2008). In addition, complicated business processes require non-standard solutions, so creative thinking will be at the top of the list of key competencies of company management (Bondarenko, Diugowanets, and Kure, 2020). Furthermore, Omolara (2018) stated that creative thinking is critical for increased sales and competitive advantage. Proctor (2010) said that creative leaders often have a big-picture view and can inspire other people with their creative skills. So, small and medium-sized businesses (SMEs) with hard problems might benefit from managerial cognitive abilities such as creative thinking skills to find solutions to complex problems.

2.4 Creative thinking at the workplace

Oldham and Cummings (1996) explain creativity as generating ideas, procedures, or products that are new or original, and potentially relevant for or useful to an organization, while Franken (2007) describes it as a tendency to generate or recognize ideas, alternatives, or possibilities and emphasizes the generation of those ideas that may be useful in solving

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problems, communicating with others, and entertaining ourselves and others. Studies (Zhou, 2008) argue that providing a working environment with creative co-workers enhances employee creativity. Moreover, employees with less creative personalities performed better while creative co-workers were present, and the more supervisors provided developmental feedback, the more employees exhibited creativity. However, once creativity has been unleashed, it needs to be applied. This will allow organizations to foster creativity as an essential source of organizational innovation and competitive advantage to secure their survival (Amabile, 1988, 1996; Oldham and Cummings, 1996). Given the vital role creative leadership plays in organizations, it is reasonable to conclude that leaders must possess individual thinking skills to be effective, especially thinking skills that foster creativity.

3. Research Design

3.1 Research methods

This study uses Fields and Bisschoff (2013) measure of creativity questionnaire, which consists of 25 questions. In addition, the data collection instrument was filled out by SME business owners from the construction and manufacturing sectors. The quantitative data captured from the questionnaire was assessed using the SPSS statistical tool to calculate the mean scores of the level of creative thinking for both the manufacturing and construction sectors. The sampling technique used was quota sampling; each stratum sample size was directly proportional to the population size of the entire population of strata, which means that each strata sample had the same sampling fraction.

3.2 Population, sample size and sampling strategy

This research selected sample units from among all possible SMEs within the manufacturing and construction sectors. In this case, the sampling unit was a person chosen to complete the survey within the SME. The strength of the research approach lay in comparing creative thinking across the best performing (manufacturing) and worst performing (construction) sectors in the South African economy. Primary data collection was conducted through the self-administered structured questionnaires given to research participants. The research questionnaires were distributed via e-mail.

3.3 Measure: Creative thinking measure

Fields and Bisschoff (2013) developed a theoretical model to measure creativity in young adults (18–25 years of age). Fields and Bisschoff (2013) affirmed the need to measure creativity to support creative development in young adults. Measuring creativity at this level has been challenging due to various cognitive and psychological factors and the external

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environment, which can dramatically foster or inhibit creativity. The researcher calculated acceptable Cronbach alpha coefficients, exceeding the minimum coefficient of 0.70. The study highlighted the value of creative graduates and the factors utilized to measure their creativity in a South African tertiary education context. This measure is then used in this research to determine the level of creative thinking of SME business owners or managers in South Africa.

3.4 Data Collection

The creative thinking questionnaire was emailed to the respondents. The data was collected from SME managers or business owners from the South African Construction and Manufacturing sectors. The reminder of the survey was sent twice.

3.5 Data Analysis

The survey was sent to 3000 recipients, of whom 842 (28%) opened it. Of those who opened the email, 216 completed the surveys in full, representing a response rate of 7.2%. Out of 216 completed surveys, only 206 were considered valid for data analysis. The data analysis results of the instrument consist of 25 creative thinking items. All these items were rated on a 5-point scale, with higher scores indicating a higher level of creative thinking. First, we determined the characteristics of the participants using descriptive statistics. Second, calculation of mean scores using mean and standard deviation to test the level of creative thinking skills for SME business owners. The mean scores were calculated with segregated data for the construction and manufacturing sectors.

The level of creative thinking of SME business owners was obtained from the Excel document and imported into SPSS software version 27 in the form of quantitative data. The scores obtained were then processed into values categorized according to the categories of creative thinking skills in Table 1 below.

Table 1 SME business Owners Creative Thinking Skill categories

Category	Total	Percentage
Excellent	Between 118 and 125	>94
Moderate	Between 63 and 94	75
Poor	Below 63	<50

4. Results

A comparison of creative thinking was done between two sectors: the construction and manufacturing sectors. Of the 206 participants, 99 (49%) were from the construction sector

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and 105 (51%) from the manufacturing sector. As depicted in Table 2, the mean age is 21.4 years, the mean headcount is 106.55, and the mean yearly gross turnover is R65 816 041.72. In the respondents' designations, owners represented the highest number, followed by managing directors, directors, and CEOs. The research shows that the respondents were at a strategic level of the organization and, therefore, competent to comment on the various measures addressed in the questionnaire, with age, headcount, and turnover showing the desired stages of longevity of the organizations.

Table 2 Descriptive statistics (age, turnover, headcount)

Statistics				
		Current estimated yearly gross turnover (Rands)	Number of employees in the organisation	Longevity (months)
N	Valid	204	204	204
Mean		65 816 041.72	106.55	257.25

In Table 3, the participants' creative thinking was not affected by age, headcount, or yearly turnover of the SME. Table 3 D. The questions tested 25 creative thinking skills. In Table 3, the results showed that all the statements of the creative thinking construct had a mean score of approximately 4, equating to 80% for 204 respondents. Also, the standard deviation confirmed the similarity of mean scores for the statement (if the data values are all similar, then the standard deviation will be low (closer to zero)). In addition, the overall mean score of the creative thinking skills was 100.46, equating to 80.36%. This shows that SME owners creative thinking was moderate based on the categories shown in Table 1. Thus, 204 SME business owners responded that they have a moderately creative thinking level.

Table 3 Creative thinking scores

Statements	SD	D	N	A	SA	Mean	STD
I like to challenge assumptions	0.0	2.5	10.3	46.1	41.2	4.25	0.74
I can find the connection between items	0.0	1.5	19.1	39.7	39.7	4.17	0.78
I have the ability to produce a great number of ideas	1.5	2.0	21.1	42.2	33.3	4.03	0.87
I look for similarity in solutions	.5	3.9	24.0	42.2	29.4	3.66	1.13
I consider the dimensionality of an issue to create ideas in terms of time	0.0	2.5	10.3	46.1	41.2	4.25	0.74
I am driven by external pressures (including other people) to solve	4.9	10.8	24.5	32.4	27.5	3.66	1.13

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problems							
I like to combining various concepts to find solutions to problems	0.5	2.0	7.4	45.6	44.6	4.31	0.73
I am self-motivated to resolve externally defined problems	0.5	1.0	5.4	42.2	51.0	4.42	0.68
To find creative solutions, I combine objects	0.5	3.9	15.2	45.6	34.8	4.10	0.83
To find creative solutions, I combine processes	0.5	2.0	9.3	50.0	38.2	4.23	0.73
To find creative solutions, I combine concepts	0.0	1.5	10.3	48.5	39.7	4.26	0.70
I propose new ideas on a regular basis	0.0	2.5	18.1	39.7	39.7	4.16	0.80
I attain understanding from a variety of information sources without difficulty	0.0	2.0	7.8	52.0	38.2	4.26	0.68
I can predict appropriate creative solutions to a problem after analysing the contradictions in a problem	0.0	0.5	17.2	49.5	32.8	4.14	0.70
I am a sensitive person	4.9	13.2	27.5	28.4	26.0	3.57	1.15
To find creative solutions, I separate concepts	2.5	7.4	25.0	40.7	24.5	3.77	0.98
To find creative solutions, I separate processes	2.0	8.8	25.0	40.7	23.5	3.75	0.97
I consider the dimensionality of an issue to create ideas in terms of time	0.5	5.4	28.4	38.7	27.0	3.86	0.89
I do not get stuck on a set of rules to solve a problem	0.5	5.4	15.7	39.2	39.2	4.11	0.89
I am self-motivated to solve self-defined problems	0.0	1.5	5.9	45.6	47.1	4.38	0.66
I intentionally engage in unpopular ideas	5.4	11.3	28.4	30.9	24.0	3.56	1.13
I am sensitive to the various aspects of a problem	2.0	3.9	20.6	44.6	28.9	3.94	0.91
To find the best creative solution, I experiment	1.5	5.4	21.6	39.7	31.9	3.95	0.94
To find creative solutions, I combine concepts	1.0	2.0	17.6	41.7	37.7	4.13	0.84
I make random attempts to solve a difficult problem	6.9	15.7	20.6	29.4	27.5	3.54	1.23

Table 4 displays the descriptive statistics regarding the creative thinking levels of SME business owners: means and standard deviations (SD); numbers and percentages. The participants consisted of 99 for the construction sector and 105 for the manufacturing sector. In these results, the summary statistics are calculated separately by sector. The results showed that the construction sector (mean 4.12, equating to 82.4%) exerted higher creative thinking skills than the manufacturing sector (mean 3.96, equating to 79.2%).t

Table 4 Descriptive Statistics – Creative Thinking

Descriptive Statistics – Creative Thinking				
	N Statistic	Mean		Std. Deviation Statistic
		Statistic	Std. Error	
Construction Sector	99	4.12	.074	.732
Manufacturing Sector	105	3.96	.057	.587
Overall Dataset	204	4.04	.047	.665

5. Conclusion

This study provides a managerial competency that can aid the longevity or survival of SMEs in South Africa. Management cognitive competencies are vital for addressing the challenges common to most SMEs and are a critical factor contributing to the performance and survival of small-scale businesses. Furthermore, SMEs are faced with complex problems, and Fields and Bisschoff (2014) argue that creative thinking and creative abilities are increasingly used to solve problems affecting human progress and survival. Therefore, to identify and solve the problems arising in business, it is vital to challenge the problem-solving capabilities of those in charge, which means restructuring and redeveloping the creative process used to approach problems to produce new ideas and perspectives (Proctor, 2010). In addition, Allen (2012:47) says creativity plays a vital role in invention, innovation, and problem-solving. Therefore, creativity plays a critical role in solving complex problems and coming up with new solutions and inventions. And it is a cognitive ability that is critical to problem-solving, so managerial cognitive abilities play an important role for people looking after organizations. This research, therefore, found that creative thinking is one of the cognitive competencies required for problem solving. And based on the results, it showed that creative thinking skills are critical for SME business owners, as they perceive themselves to be creative. And therefore, testing the creative thinking skills level simulated the creative thinking skills level of SMEs This can assist SMEs in incorporating creative thinking skills as a key strategic resource that can be incorporated into management skills.

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