

Corporate entrepreneurship and organisational performance in the educational sector: Examining gender, age, and managerial level perceptual differences

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Abstract

It is not surprising that firms benefit from adopting and practicing entrepreneurial activities in both public and private sectors. However, the study of corporate entrepreneurship (CE) in the education sector and university entrance performance is limited. Therefore, this study examines the relationship between CE and performance in the education sector as well as the perceived differences in terms of gender, age, and managerial levels. The study employed both descriptive and explanatory design and data were collected from a total of 426 respondents from the Department of Education in the KwaZulu Natal province of South Africa. The study found that there is statistically significant correlation between all CE practices and University Entrance Performance. Besides, the study shows that there is no statistically significant difference of opinion between the mean scores of male and female respondents about how they perceive the level of CE elements. The study also shows that a statistically significant variance does not exist between the various age groups and management levels on how they perceive the levels of CE in the Department of Education. Therefore, the public educational sector must adopt CE to enhance the organizational performance.

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1. Introduction

1.1 Background of the study

The pursuit of entrepreneurial enquiry is an exercise that has engaged scholars for decades (Ozdemirci, 2011). It is not surprising that firms benefit from adopting and practicing entrepreneurial activities in an effective way (Chebo et al., 2018). This entrepreneurial behaviour and activity within mid and large organisations have come to be described as corporate entrepreneurship (CE). In particular, the strong desire and drive to discover business opportunities affect the involvement in entrepreneurial activity (Chebo & Kute, 2018). According to Corbett et al., (2013), CE includes strategic renewal, domain redefinition, organisational rejuvenation, and business model reconstruction. This is the type of entrepreneurship expected to be employed in the educational sector. Education researchers have applied different approaches to entrepreneurship to those in the for-profit milieu, because education is generally a non-profit field (Borasi & Finnigan, 2010). Educational entrepreneurship is an organisations' tendency to initiate and implement incremental and radical innovations in its environment, indeed, falls under corporate entrepreneurship (Eyal, 2007). According to Hamzah et al., (2009), the terms CE have seldom been referred to in education. The meaning of entrepreneurship in education is not clarified (Attali & Yemini, 2016), nor is its domain conceptually differentiated from the entrepreneurial domain as understood in the private sector organisation (Man, 2010). However, entrepreneurs in the education sector, as defined by Wiseman (2014), are individuals or groups who seek to lead the transformation of the education system; and they consistently turn ideas into initiatives that create value for their institutions and the customers they serve. Educational entrepreneurship focuses strategically on short- and long-term opportunities for learning that will create significant value for individuals and societies. The term 'entrepreneur' has been inextricably linked to businesses and capitalism, but generally carries a positive connotation (Nieswandt, 2017). Entrepreneurship attributes are honest attributes that can be the foundation for education administrators and managers that can enable them to find and create opportunities for others in the context of educational institutions. According to Levin (2006), the broad definition of entrepreneurship suggests a potentially key role in education, through innovation and managerial breakthroughs required to provide quality education.

Corbett et al., (2013) observe that there is increased interest in the strategy of CE which has resulted in improved organisational performance. This suggests that the more organisations

behave in an entrepreneurially orientated manner and implement related strategies, the more they are likely to improve performance. Individuals engage in entrepreneurial activities because of both individual and institutional conditions (Kosa & Mohammed, 2017). Accordingly, Hornsby et al., (2013) have singled out specific organisational antecedents that are key in achieving entrepreneurship within an organisation. These dimensions of CE include top management support; work discretion; rewards/reinforcement; discretionary time; and organisational boundaries (Hornsby et al., 2002; Kuratko et al., 2014). However, for the purposes of this study, a sixth antecedent, organisational tolerance for risk and failure is added based on a study by Antonites, & Wordsworth, (2009).

Ireland et al., (2010) added that although CE is said to improve organisational performance, not all CE activities lead to improved organisational performance. More important than the realisation of increased organisational performance is the understanding of the multiple facets of CE and how these interlink to result in improved performance. This has prompted some interest in the field from several other perspectives. That is, scholars in the field of entrepreneurship agree that the concept exists in multiple contexts within organisations. For example, based on the meaning of entrepreneurship, Hamzah et al., (2009) are of the opinion that the time has come for the educational institutions to absorb entrepreneurship characteristics, with reference to education administrators and managers.

As a result of globalisation and liberalisation challenges, choosing education institution managers and administrators has become aggressive and dynamic to handle the challenges faced by the South Africa's Department of Education. The managers must have a set of comprehensive skills, and it is possible that by absorbing entrepreneurship characteristics, education institutions will be more successful if education executives can be public entrepreneurs.

Education institutions are the focus of great expectations but are habitually blamed for poor results and an inability to meet expectations. In response to these persistent issues, the Department of Education is under constant pressure to change and improve learner performance. Accordingly, education managers and executives are obliged to acquire and practise entrepreneurial leadership characteristics to improve their institution's effectiveness and performance. However, although the entrepreneurship phenomenon is applicable in the education field and can improve educational performance (Pihie et al., 2014), note that due to changes around the world affecting education, it is critical to understand the government's

policy position on promoting entrepreneurship in public education. Therefore, this study assesses the relationship between CE and University Entrance Performance (UEP), as well as managers perceived difference on CE and UEP. The UEP is an important performance measure as it is the country's secondary school exit level. A good UEP would qualify one, acceptance for a university study. Both teachers, administrators and students are all targeting a UEP pass as an outcome of the secondary school system.

1.2. Statement of the problem

According to the Schirmer and Visser (2024), the consistently poor learners' academic performance prompted government to conceptualise several initiatives to improve the quality of schooling. The organisational performance will be evaluated based on the number of learners who pass matric (Grade 12); the number of learners who pass matric with university entrance passes; and the number of learners who pass matric mathematics and physical science, as these are considered the most important subjects required to improve the economy of the country.

Despite the evidence of the benefits that can be generated by entrepreneurially orientated strategies in improving organisational performance, the Department of Basic Education in South Africa is still lagging in the quality of the schooling system (Nortje, 2017). This leads one to advance the argument that the poor education quality in South Africa is a result of a dearth of entrepreneurial thinking and orientation in the department. Therefore, there is a need to investigate the extent to which some form of CE exists within the Department of Education in KZN. The benefits of entrepreneurship have been widely documented and accepted (Hughes & Morgan, 2007). There is also a need to ascertain the extent to which efforts to inculcate an entrepreneurial behaviour and culture within the organisation can influence positively the quality of the schooling system.

The department needs to improve its performance, and this may be achieved through CE and entrepreneurially oriented behaviour (Thabethe, Chebo, & Dhliwayo, (2024. It is primary research like this which will yield data that will be useful to policy formulation and decision-making. The Department of Basic Education Annual Report (2022/ 3) notes that although there have been some improvements in the education sector, there are still some areas of concern. Amnesty International (2020) further note that issues of accountability and quality of education are inextricably linked to issues of education management.

The South African education system ranks very low among those of many others in the world. South African learners also perform badly in standardised global tests against South Africa's peers and other African countries (Amnesty International, 2020). Schirmer and Visser (2024) explains that some of the most under-performing schools in Singapore perform better than most of the top achieving schools in South Africa. The problem lies with the execution of current policies. On the government level, problems emanate from lack of teacher support and monitoring. All this has led to disenchantment among teachers and poor learner performance.

Without education managers who manage resources efficiently (as entrepreneurs), any policy intervention will achieve limited success. Besides, the research on the relationship between organisational performance and CE in the South African public sector in general and the Department of Basic Education in particular, is limited. With this background in mind, the study intends to address this gap in research by establishing the relationship between organisational performance and CE within the department, using the key organisational antecedents of CE and UEP (University entrance performance).

1.3. Purpose of the study

With several different programmes and initiatives being implemented by the Department of Basic Education to improve learner achievement and quality of education as such, the primary objective of the study was to determine how CE relates to performance. This would be achieved through the two specific objectives which are:

1. To explore the relationship between CE and performance within the Department of Education in KZN and
2. To establish whether differences in perception existed among the department's management levels, age groups and gender regarding the levels of CE within the Department of Education in KZN.

1.4. Hypothesis of the study

These objectives were measured by several hypotheses. Objective 1 is measured through hypothesis 1, correlation of CE elements and performance. Objective 2 is measured through hypothesis 2, 3 and 4 which hypothesises differences in perception among, gender (H2), age (H3) and management levels (H4). These are outlined in the next section:

H1: There is no statistically significant positive correlation between CE practices (a) management support for CE-MS (b) organizational tolerance-OT (c) work discretion-WD (d) reward/reinforcement-RW (e) discretionary time-DT (f) organizational boundaries-OB and (g) university entrance performance- UFP.

H2: There is no statistically significant difference of opinion between the mean scores of male and female respondents with regards to how they perceive the level of CE practices (a) MS for CE (b) OT (c) WD (d) RW (e) DT (f) OB (g) UFP.

H3: A statistically significant variance does not exist between the various age groups and how they perceive the levels of CE practices (a) MS for CE (b) OT (c) WD (d) RW (e) DT (f) OB (g) UEP.

H4: A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of CE practices (a) MS for CE (b) OT (c) WD (d) RW (e) DT (f) OB (g) UEP.

1.5. Significance of the study

The study highlights the importance of entrepreneurship as a solution to resolve the challenges facing the education system. Eyal (2007) observes that being entrepreneurially inclined inspires managers to innovate and improve their environments and institutions such as the Department of Education in South Africa. In this regard, the study will contribute to the general scholarship on educational sector CE and its organisational performance impact.

This study contributes to that body of knowledge by focusing on educational entrepreneurship. The study goes further than just contributing to the literature on the public sector but extends research on CE in general. This responds to the call to extend corporate entrepreneurship outside the private sector (Diefenbach, 2011). Specifically, the study findings show how education management practices can be modelled to support CE. The study will also guide policy makers and top management in inclining their organisations to be more entrepreneurially oriented, which serves to improve performance and public service delivery. Education is a public service product.

2. Research design and methodology

2.1. Research design

This research was designed as a formal study. The goal of a formal research design, according to Cooper and Schindler (2014), is to test the hypotheses posed by the research questions. The research design of this study is both descriptive and explanatory. The explanatory design is used to determine whether there is a significant difference between men and women age groups and management levels regarding their perception on CE.

The KwaZulu-Natal Province was purposively, for convenience, selected for the study. It is not one of the poor performing provinces and therefore it makes a good case study to test the perceived prevalence of CE and CE's relationship with performance. There are 22865 managers targeted for this study in the Department of Education in KwaZulu-Natal. The sample size was determined by using a sample size calculator, using confidence level of 99% and a margin of error of 5% were used in calculating the sample size. Out of the total population of 22 865 that was identified for the study, the sample size calculator resulted in a sample size of 647 participants. A total of 647 questionnaires were therefore distributed by the researcher and 426 were collected and used. This represented an overall successful response rate of 65.7%. According to Cooper and Schindler (2014), a response rate of 50% or more is adequate.

2.2. Data collection and instruments

Questionnaires were distributed by the researcher to twelve chief education specialists in the twelve education districts in KZN for filling in by the identified respondents, as discussed in the sampling procedure.

The questionnaire was organized in three sections. Section A contains respondents' biographical information such as gender, age, ethnic group and present job title, which were recorded in nominal data. Section B measures CE, on a 1 to 5 Likert scale, ranging from 1= strongly disagree to 5 = strongly agree. The CE instrument measured six key areas in accordance with the hypotheses: (1) Management support for CE with 8 items; organisational tolerance with 8 items; work discretion with 5 items; rewards/reinforcement with 9 items; discretionary time with 6 items, and organisational boundaries with 9 items. The Corporate Entrepreneurial Assessment Instrument (CEAI), developed by Hornsby et al., (2002), is the basis of this measurement., Section C, measurements for UEP, were developed into a 5-point Likert scale ranging from 1 (decreased significantly); 2 (decreased); 3 (remained the same); 4 (increased); and 5 (increased significantly).

2.3. Validity and reliability

To check the validity and reliability of the questionnaire in gathering the data required for purposes of the study, a pilot test was carried out. In this study, the data collection instrument (a questionnaire) was tested on 15 respondents to ensure that it was relevant and effective. The 15 do not form part of the final sample size used in the study. The reliability of data was tested using Cronbachs Alpha and found; 0.837 for management support, 0.724 for organizational tolerance, 0.757 for work discretion, 0.856 for rewards/reinforcement, 0.870 for discretionary time, and 0.810 for organizational boundaries and UEP, 0.778.

2.4. Data analysis technique

Information was sorted, coded and input into the statistical package for social sciences (SPSS) to produce graphs, tables, descriptive statistics and inferential statistics. Data central tendencies, including mean and standard deviation is presented. Correlation analysis was used to test the significant relationship between the CE practices and UEP. ANOVA was used for testing the null proposition, that the means of several populations are equal.

3. Results and discussion

The study's results are presented and then discussed.

3.1 Descriptive statistics

Descriptive statistical techniques are used to describe the characteristics of the population or sample. Accordingly, Table 1, shows the means of all the constructs, indicating the prevalence of practices of corporate entrepreneurship within the Department of Education in KZN. The elements for an entrepreneurial climate have a strong presence, but there is still room for improvement.

Table 1: Entrepreneurial climate survey results

Factor	N	Min	Max	Mean	Std Dev.
Management support for CE	426	1.00	5.00	3.3698	0.68521
Organisational tolerance	420	1.00	5.00	3.2675	0.66170
Work discretion	419	1.00	5.00	3.3178	0.79478
Rewards/Reinforcement	422	1.00	5.00	3.3277	0.78502
Discretionary time	424	1.00	5.00	3.1787	0.81245
Organisational boundaries	425	1.00	5.00	3.6353	0.68019

Results (Table 1) indicate that, management support for CE (mean = 3.3698); risk taking (mean = 3.3237); rewards/reinforcement (mean = 3.3277); work discretion (mean = 3.3173); organisational tolerance (mean = 3.2675) and discretionary time (mean = 3.1787) had a mean

above three out of five. The results indicate that these practices were perceived by participants to have a presence in the department.

3.2 Correlation analysis

The Pearson product moment r correlation test was carried out on the seven factors to assess their relationship. The results of the correlation test carried out are shown in Table 2. With the respondents of this study indicating that the Department of Education in KZN is practising CE, it was important to test the relationship between the practices of CE and the performance of the Department of Education in KZN.

Table 2: Pearson’s correlations between the various factors

No	Factors	1	2	3	4	5	6	7
1	MNG	1						
2	OGT	.567 ^{xx}	1					
3	WKD	.388 ^{xx}	.455 ^{xx}	1				
4	RWS	.491 ^{xx}	.426 ^{xx}	.455 ^{xx}	1			
5	DST	.467 ^{xx}	.467 ^{xx}	.426 ^{xx}	.630 ^{xx}	1		
6	OGB	.519 ^{xx}	.519 ^{xx}	.461 ^{xx}	.617 ^{xx}	.584 ^{xx}	1	
7	UEP	.332 ^{xx}	.519 ^{xx}	.280 ^{xx}	.236 ^{xx}	.280 ^{xx}	.332 ^{xx}	1

^{xx} “Correlation is significant at $\alpha = 0.01$ level (2-tailed)”

The study aimed at establishing the relationship between the CE practices and organisational performance, which was measured in university entrance (UEP). Prior empirical studies have shown that CE practices that define the role of entrepreneurship in an organisation have a significant and positive relationships with organisational performance (Umair, et al., (2020); Bayarcelik and Ozsahin, 2014). The results of this study also show the positive relationship between CE practices and university entrance and output performance in the Department of Education in KZN. It is then reasonable to expect that organisational factors are important antecedents that shape organisational culture and support an organisation’s entrepreneurial behaviour. The results of this study are consistent with the above arguments. Other studies also reported that CE is positively related to organizational performance (e.g., Rodríguez-Peña, (2023); Corbett et al., 2013). Consistently, this study finds that there is a significant positive correlation between each of the CE practices (management support for CE; organisational boundaries; work discretion; rewards/reinforcement; discretionary time and organisational boundaries) and university

entrance performance, tested at 0.01. All the p values are < 0.01 and therefore all hypotheses (H1a-H1f) are rejected.

Hypothesis H1a was not supported. Management support for CE is positively associated with university entrance performance, meaning that an organisation that has more management support for CE will then allow corporate entrepreneurs to be more innovative (Chen & Cangahulla, 2010). The results of hypothesis (H1b) indicate that in the DoE, organisational tolerance is positive and significantly associated with university entrance performances, which means that managers and employees with a high tolerance for ambiguity endeavour to overcome unstable and unpredicted situations to perform well (Nam, Lee, & Kang, 2023), and hence improve organisational performance. The results for hypothesis (H1d) indicated that rewards are positively associated with university entrance performances, meaning that an organisation that gives more rewards will then perform better (Tseng, & Tseng, 2019). The results of hypotheses H1c, H1e and H1f indicate that there is a positive and significant relationship between work discretion, discretionary time and organisational boundaries, and university entrance and output performance.

Public sector organisations and education departments have been significantly influenced by practices in the private sector (Malatjie et al., 2017). However, in many respects performance management in the public sector is relatively more complicated because of the many over-riding goals, compared to the private sector organisations, whose main goal is profit maximisation and the provision of satisfactory financial returns for shareholders (Boland & Fowler, 2000). CE is receiving increased attention among entrepreneurship scholars; but studies linking CE to organisational performance in the public sector have been somewhat limited. Research by Arbaugh et al., (2009) and Rodríguez-Peña, (2023) has raised concerns about a direct relationship between CE and organisational performance, suggesting that this relationship may be moderated by characteristics such as the nature of the environment or organisational factors.

This study found that CE has a statistically positive and significant relationship with organisational performance. These findings support what is indicated in the literature; that CE has a positive impact on the performance of an organisation. The findings of this study seem to suggest that organisations wishing to embrace CE should not think of establishing the climate for entrepreneurship on a partial basis, but should do so in totality, for organisational antecedents to have a positive impact on organisational performance (Malatjie et al., 2017).

3.3 Perceived differences among male and female regarding CE practices

The t-test was used to analyse whether there were significant differences between the mean scores of male and female respondents regarding how they perceived the presence of the different practices of CE in the Department of Education in KZN. Hypothesis H2 stated that there is no significant

difference of opinion between the mean scores for male and female respondents about how they perceive the level of management support for CE (H2a); organisational tolerance (H2b); work discretion (H3c); rewards/reinforcement (H4d); discretionary time (H2e); and organisational boundaries (H2f) in the Department of Education in KZN.

Table 3 shows that all the p-values of Levene’s t-test are greater than 0.05 ($p > 0.05$). The p-values are 0.123 for management support for CE; 0.621 for organisational tolerance; 0.647 for work discretion; 0.565 for rewards/reinforcement; 0.768 for discretionary time; and 0.621 for organisational boundaries. This suggested that the assumption of homogeneity variance was not violated ($p > 0.05$); hence the group variances can be treated as equal. The p-values are also greater than 0.05 ($P > 0.05$). Both groups considered the CE practices to be important for organisational success. Therefore, all the hypotheses H2 (a-f) are accepted.

Table 3: Independent Sample Test – Gender (CE)

		Levene's Test for Equality of Variances		T-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
MNG Males Females	E V assumed	2.394	0.123	-1.019	422	0.309	-0.06791	0.06665
	E V not assumed			-1.022	421.994	0.307	-0.06791	0.06645
OGT Males Females	E V assumed	0.244	0.621	0.449	416	0.653	0.02919	0.06494
	E V not assumed			0.449	411.934	0.654	0.02919	0.06500
WKD Males Females	E V assumed	0.210	0.647	-0.941	415	0.347	-0.07326	0.07787
	E V not assumed			-0.941	412.966	0.347	-0.07326	0.07787
RWS Males Females	E V assumed	0.332	0.565	-1.354	418	0.177	-0.10388	0.07673
	E V not assumed			-1.354	415.688	0.176	-0.10388	0.07670
DST Males Females	E V assumed	0.087	0.768	-0.415	420	0.678	-0.03295	0.07939
	E V not assumed			-0.415	418.873	0.678	-0.03295	0.07932
OGB Males Females	E V assumed	0.244	0.621	0.449	416	0.653	0.02919	0.06494
	E V not assumed			0.449	411.934	0.654	0.02919	0.06500

Significance level $\alpha = 0.05$

The study by Camelo-Ordaz, et al., (2016) on the influence of gender on entrepreneurial intention also revealed that “perceptual factors do not explain gender differences in the entrepreneurial intention exhibited by male and female entrepreneurs”.

3.4 Perceived difference of different age groups regarding CE practices and performance

Objective four of the study was to establish if differences in perception existed among the department’s management regarding the entrepreneurial climate within the Department of Education. This section intends to establish if differences exist between the age groups of

managers with regards to CE and UEP variables. The one-way analysis of variance (ANOVA) method was used to analyse the differences between the age groups with regards to the CE and performance variables. This statistical analysis method was used because the age variable had more than two categories.

Hypotheses H3 stated that a statistically significant variance does not exist between the mean values of the various age groups and how they perceive the levels of CE practices (management support for CE (H3a); organisational tolerance (H3b); work discretion (H3c); rewards/reinforcement (H4d); discretionary time (H3e) organisational boundaries (H3f); and university entrance performance (H3g) in the Department of Education in KZN. The results, as shown in Table 4, indicate the existence of statistically significance differences between the age groups on management support for CE. The p-values for organisational tolerance; work discretion; rewards/reinforcement; discretionary time; organisational boundaries; and university entrance performance were all bigger than 0.05 ($p > 0.05$). The p-values are bigger than $\alpha = 0.05$ ($P > 0.05$); therefore, the hypotheses H3a-H3g were all accepted.

Table 4: Age and CE Practices ANOVA Result

Factor	Source of Variation	Sum of Squares	df	Mean Square	F-Value	P-Value
Management Support for CE	Between Groups	2.936	2	1.468	3.188	0.042 ^{xxx}
	Within Groups	193.398	420	0.460		
	Total	196.33	422			
Organisational Tolerance	Between Groups	0.428	2	0.214	0.493	0.611
	Within Groups	179.661	414	0.34		
	Total	180.089	416			
Work Discretion	Between Groups	2.943	2	1.472	2.351	0.097
	Within Groups	258.494	413	0.626		
	Total	261.437	415			
Rewards/ Reinforcement	Between Groups	3.250	2	1.625	2.667	0.071
	Within Groups	253.484	416	0.609		
	Total	256.734	418			
Time Availability	Between Groups	1.886	2	0.943	1.441	0.238
	Within Groups	273.533	418	0.654		
	Total	275.419	420			
Organisational Boundaries	Between Groups	2.071	2	1.035	2.290	0.103
	Within Groups	189.485	419	0.452		
	Total	191.556	421			
Performance: University Entrance	Between Groups	0.537	2	0.269	0.505	0.604
	Within Groups	206.470	388	0.532		
	Total	207.008	390			

^{xxx} Indicates a statistical significance at $\alpha = 0.05$ level

According to Mabala (2012), there is no significant difference in how respondents of different ages perceive organisational tolerance; work discretion; rewards/reinforcement; discretionary time; and organisational boundaries in the Department of Correctional Services.

Older workers do not find a stable and familiar workplace environment more appealing than their young counterparts (Moodely, 2014). The older employees start comparing the present work environment with the old one. Changes which are introduced into the Department of Education, such as curriculum changes and new policies, are some of the possible issues that might affect the perceptions of the older employees. The way they are being supported by management could also be another factor, since most top managers in the department are younger employees. As part of management support for CE, the Department of Education should provide resources (such as computers, laptops and other technological tools of the trade) that the employees require to take entrepreneurial action. The department is very slow in providing such support to employees and this might cause the differences of opinion or perception between the different age groups, depending on their familiarity with the processes of the department.

The Department of Education could be perceived to be tolerant of failure as it provides decision-making latitude and freedom from excessive oversight by delegating authority and responsibility to lower managers (departmental heads in schools, school principals, education specialists, deputy chief education specialists and chief education specialists). Although this work discretion exists in the department, the delegated functions are sometimes not very clearly defined and, in some cases, they are perceived to be non-existing. Employees in district offices, for example, are expected to follow the same work procedures repeatedly, year after year.

3.5 Management perception of CE elements and performance

The study's second objective was to establish if differences in perception existed among the department's management regarding the entrepreneurial climate within the Department of Education. This section intends to establish if differences exist in the various management levels with regards to their perception of the CE and organisation performance. The analysis of variance (ANOVA) was carried out to test if there was a statistically significant variance between the perceptions of various managerial levels, reflected by means, of the presence of each of CE practices and performance. The managerial levels were: Chief Education Specialist/ Deputy Director, Deputy Chief Education Specialist/ Circuit Manager, Principal/Deputy Principal/Assistant Director, and Senior Education Specialist/ Departmental Head

Hypothesis H4 stated that a statistically significant variance does not exist between the mean scores of various management levels of participants about how they perceive the levels of CE practices (management support for CE (H4a); organisational tolerance (H4b); work discretion (H4c); rewards/reinforcement (H4d); discretionary time (H4e); organisational boundaries (H4f); and university entrance performance (H4g) in the Department of Education in KZN. Applying the p-value acceptance rule that one should accept the hypothesis if, and only if, the p-value is larger than 0.05 ($p > 0.05$), hypotheses H4a-H4g were accepted.

Table 5: The Management Levels, CE practices and Performance

Factor	Source of Variation	Sum of Squares	Df	Mean Square	F-Value	P-Value
Management Support for CE	Between Groups	3.091	3	1.030	2.220	0.085
	Within Groups	194.480	419	0.464		
	Total	197.572	422			
Organisational Tolerance	Between Groups	2.309	3	0.770	1.759	0.154
	Within Groups	180.694	413	0.438		
	Total	183.003	416			
Work Discretion	Between Groups	1.252	3	0.417	0.657	0.579
	Within Groups	261.775	412	0.635		
	Total	263.027	415			
Rewards/Reinforcement	Between Groups	0.130	3	0.043	0.070	0.976
	Within Groups	259.095	415	0.624		
	Total	259.225	418			
Time Availability	Between Groups	0.429	3	0.143	0.216	0.885
	Within Groups	275.924	417	0.662		
	Total	276.354	420			
Organisational Boundaries	Between Groups	0.223	3	0.074	0.160	0.923
	Within Groups	194.761	418	0.466		
	Total	194.984	421			
Performance: University Entrance	Between Groups	1.365	3	0.455	0.851	0.467
	Within Groups	206.916	387	0.535		
	Total	208.280	390			

^{xxx} Indicates statistical significance at $\alpha = 0.05$

The ANOVA results revealed that there are no statistically significant differences in the perceptions of different respondent management groups on the research factors: management support for CE; organisational tolerance; work discretion; rewards/reinforcement; discretionary time; organisational boundaries; university entrance performance; and output performance in the Department of Education; with p-values of 0.085; 0.154; 0.579; 0.976; 0.885; and 0.923, respectively. These are all larger than 0.05 ($p > 0.05$). This result shows that management level does not play a significant role in the perception of CE and UEP in the Department of Education in KZN.

Table 6: Summary of Results Relating to Tested Hypotheses

H	Statements	Decision
H1	a) There is no statistically significant correlation between management support for CE and University Entrance Performance	Rejected
	b) There is no statistically significant correlation between organizational tolerance and University Entrance Performance	Rejected
	c) There is no statistically significant correlation between work discretion and University Entrance Performance	Rejected
	d) There is no statistically significant correlation between reward/reinforcement and University Entrance Performance	Rejected
	e) There is no statistically significant correlation between discretionary time and University Entrance Performance	Rejected
	f) There is no statistically significant correlation between organizational boundaries and University Entrance Performance	Rejected
H2	a) There is no statistically significant difference of opinion between the mean scores of male and female respondents regarding how they perceive the level of MS for CE.	Not Rejected
	b) There is no statistically significant difference of opinion between the mean scores of male and female respondents regarding how they perceive the level of OT.	Not Rejected
	c) There is no statistically significant difference of opinion between the mean scores of male and female respondents regarding how they perceive the level of WD.	Not Rejected
	d) There is no statistically significant difference of opinion between the mean scores of male and female respondents regarding how they perceive the level of RW.	Not Rejected
	e) There is no statistically significant difference of opinion between the mean scores of male and female respondents regarding how they perceive the level of DT.	Not Rejected
	f) There is no statistically significant difference of opinion between the mean scores of male and female respondents regarding how they perceive the level of OB.	Not Rejected
H3	a) A statistically significant variance does not exist between the various age groups and how they perceive the levels of MS.	Rejected
	b) A statistically significant variance does not exist between the various age groups and how they perceive the levels of OT.	Not Rejected
	c) A statistically significant variance does not exist between the various age groups and how they perceive the levels of WD.	Not Rejected
	d) A statistically significant variance does not exist between the various age groups and how they perceive the levels of RW.	Not Rejected
	e) A statistically significant variance does not exist between the various age groups and how they perceive the levels of DT.	Not Rejected
	f) A statistically significant variance does not exist between the various age groups and how they perceive the levels of OB.	Not Rejected
	g) A statistically significant variance does not exist between the various age groups and how they perceive the levels of UEP.	Not Rejected
H4	a) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables MS for CE.	Not Rejected
	b) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables OT.	Not Rejected
	c) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables WD.	Not Rejected
	d) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables RW.	Not Rejected
	e) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables DT.	Not Rejected
	f) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables OB.	Not Rejected

	g) A statistically significant variance does not exist between the various management levels of participants and how they perceive the levels of the stated variables UEP.	Not Rejected
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4. Conclusions and recommendations

The study analysed several correlations between factors that constitute two constructs, corporate entrepreneurship and organisational performance. The fact that the correlations are positive and significant is a sign that the Department of Education in KZN is moving towards improved performance, action are not realised by piecemeal or token appreciation or application (Dhliwayo & Van Vuuren 2007). The Programme for Improvement of Learning Outcomes (PILO) is one of the programmes in the KZN Department of Education aimed at improving learner performance. However, the entrepreneurship aspects are not included. Therefore, its recommended that CE is considered in the PILO program.

The results of the various tests revealed that there is no difference of opinion with regards to how male and female respondents perceived corporate entrepreneurship levels in the Department of Education in KZN. There were also no differences of perception when it comes to levels of management; however, differences were recorded among the different age groups. According to Morris et al., (2011), management should be willing to facilitate and promote entrepreneurial behaviour in an organisation. It is therefore important for management, particularly top management, in the Department of Education, to give input, get involved and encourage employees to take entrepreneurial action.

It is the researchers' view that the Department of Education in KZN should embrace a culture of tolerance towards risks, mistakes and failure by allowing employees the chance to take risks that will enable them to be creative. The researcher recommends that top management give employees an opportunity to voice their views on the reasons for poor performance and how it can be solved. Even if this involves some element of failure, at least they will have learned in the exercise. They will also own the results of poor performance, unlike when everything has been imposed on them.

The results indicate that employees have autonomy in doing their jobs. It is therefore recommended that, if proper work discretion is to be used to promote corporate entrepreneurship, the correct people for the job are employed; and there should be trust between employees and management. Management should not be seen taking the functions of

the employees, unless an employee has demonstrated some level of negligence in doing his/her job because of work discretion.

Like any public sector organisation, the Department of Education seldom recognises innovation, offering little in the form of incentives for public sector employees (Holbrook, 2010). It is therefore important that employees are rewarded for their entrepreneurial behaviour in the Department of Education. It is recommended that: better reward/reinforcement should be put in place to reinforce and encourage entrepreneurial behaviour in the Department. It is important that time is made available for CE. As much as the results indicate that there is discretionary time in the Department of Education, it is recommended that discretionary time, in consultation with employees, should be made available to promote corporate entrepreneurship in the Department of Education in KZN. It is further proposed that a more flexible and differentiated approach be considered for time allocation for teachers. Besides, it is important that communication channels become flexible to promote CE in the Department of Education. As much as results indicate that organisational boundaries are positively related to corporate entrepreneurship elements, the Department of Education, as a public sector organisation, is known for standard operating procedures, narrow job descriptions and inflexible performance standards (Kuratko, 2008). Although results indicate the positive and significant relationship between organisational boundaries and CE, the inflexible policies of the education department can inhibit the employees' capacity to foster CE (Kearney et al., 2009). It is therefore recommended that organisational boundaries should be established that are not highly rigid, with less red tape, and that are not in conflict with the development of an entrepreneurial culture in the Department of Education in KZN.

The study results indicate that the young respondents did not agree with the statement that there is management support for CE in the Department of Education in KZN. Scheepers et al., (2013) states that management support for CE plays a key role in encouraging employees to believe that innovation is expected from all organisational members. According to the younger participants in this study, this is not the case with the Department of Education in KZN. According to Konya et al., (2016), the age of respondents is one of the most important characteristics in understanding a particular problem. By and large, age indicates the level of maturity of an individual. In that sense, it becomes important to consider age.

Age enables employees to better understand and adapt to the values of the organisation, as well as to harmonise those values with their own values and goals (Jackalas, Martins and Ungerer (2016). Younger employees often have expectations which are too high, and are holding onto which in some situations, prevent them from realistically perceiving and evaluating the values and goals of the organisation (Konya et al., 2016). These could be possible reasons for the difference of opinion between young and older managers about how they perceive levels of management support in the Education Department in KZN.

It was not the intention of this study to test for causality. However, it is acknowledged that testing for causality between CE and performance could have produced better insights. This is recommended as a future study.

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