

A Descriptive Analysis of the Eastern Cape School Indicators

NCANYWA, T.

Abstract

This paper seeks to analyse the trends of education indicators that affect efficiency at schools in the Eastern Cape in the period 2009 to 2013. The focus is on the state of public ordinary schools which include primary and secondary schools from grade one to grade twelve. The province is regarded as a poor province as it constituted 95% of quintile one to three schools which are declared as 'no fee schools'. There had been decline in learner performance as learners' progress to higher grades and a drastic decline in important subjects such as Mathematics. The province had a significant number of educators with 16 years' experience and

an average of 45% under-qualified educators in 2013. There were variations in educator learner ratios per district with larger ratios found in the former Transkei. The province progressed well in learner transport, learner teacher support material and school nutrition programmes. There was no virtual change in infrastructural developments. Education in schools should be provided in a manner that ensures learners can realise their potential and aspirations, in schools that facilitate learning and reduce societal disparities.

Keywords: Education Indicators, Public Schools, Learner Performance, Educators.

Introduction

Beginning early in the 20th century, the apartheid system dominated by White South African government used a Bantustan system. The South African apartheid system consisted of different education systems such as the Cape Province for the provision of white education; the Department of Education and Training for the provision of African education outside the homelands; Bophuthatswana, Venda, Ciskei and Transkei which were formerly independent homelands; the House of Representatives for Coloured and the House of Delegates provided Indian education. The systems were marked with discrepancies in educational funding per learner across racial groups and residential areas (Case & Deaton 1999). There were large variations in school resource allocations across districts with the large Black community allocated few resources (Bhorat & Oosthuizen 2006). After 1994, all the previously mentioned education systems were fused into one democratic education system that had to address high levels of inequality within provinces. For instance, the Eastern Cape had to fuse education departments from Ciskei, Transkei and former Republic of South Africa, taking over from the poorly managed homeland system. In spite of the challenges adopted from the apartheid system, the democratic government had to acknowledge the rights to education conferred on South Africans by Chapter 2 of the Constitution (RSA, 1996); (Government Gazette 1996). The Bill of Rights gives all South Africans the right to basic education, including adult basic education.

Remarkable advances have been made in funding and equity in the schooling system since the advent of a democratic order in the country in 1994 (DoE, 2003); (DoE 2007). For example, there had been developments in the payment of educators through the professional Occupation Specific Dispensation (OSD) salary system. Operational expenditure is allocated to school per learner according to the quintile category of the school, beginning from quintile one categorized as the poorest school in resources and allocated a largest share to quintile five as the richest school in terms of resources (DoE, 2007). Operating expenses include provision of infrastructure, stationary and learner teacher support material. Addressing the poverty status of communities, schools in quintile 1 to 3 are no fee schools and are benefitting from the national school nutrition programmes. Learners who used to travel long distances are provided with scholar transport. Therefore, the South African government working with provinces have experienced significant interventions in view of public expenditure, aimed at improving

education access, quality and efficiency, as well as redressing the imbalances created by historical inequalities (Mancebon & Molinero 2000). Despite the interventions the Eastern Cape schooling system continues to face a number of challenges, perhaps best exemplified by poor grade 12 pass rates more especially in Mathematics (DoE, 2012).

Across literature and the policy arena there is a growing consensus that input resources play a key role in learner performance and therefore schooling outcomes. This is regardless the fact that the reasons of poor learner performance are varied, ranging from inefficient use of available resources to insufficient supply of input resources. Recent empirical evidence show a growing body of research on how inputs affect schooling outcomes (Mancebon & Molinero 2000); (Ray 1991); (Glewwe 2002); (Bhorat & Oosthuizen 2006); (Crouch & Mabogoane 1998); (Taylor 2009); (Taylor 2011); (Berg 2013). The key indicator variables include inputs such as educator learner ratios, school infrastructure, learner teacher support materials, nutrition programmes, learner transport, and educator quality; and output as learner performance (Badri & Mourad 2012); (Bhorat & Oosthuizen 2006); (Borge & Naper 2006).

In spite of the concerns around the factors affecting learner performance and what inputs determines the pass rates; little is known about the Eastern Cape schooling process. It was interesting to undertake this study so as to provide an understanding of how the aforementioned inputs trended in the period towards the second decade of democracy in South Africa. The Eastern Cape represented an ideal focus of attention as a poor and rural province getting a larger share of the national budget allocation in basic education but produce disappointing learner outcomes. Therefore, the study seeks to analyse the trends of education indicators that affect efficiency at schools in the Eastern Cape by providing a descriptive analysis in the period 2009-2013. The paper will be structured as follows: section 2 discusses the stylized facts of the Eastern Cape schools, followed by section 3 with the descriptive analysis of school indicators. The final section concludes the paper.

Stylized facts of the Eastern Cape schools

Ordinary schools are divided into public and independent schools. The paper focused on the analysis of public schools as they constitute 97% of ordinary schools (DBE 2013a). Ordinary public schools in the Eastern Cape comprises of primary, secondary and

combined schools, where combined schools are a combination of primary and secondary schools. The province consists of about 44% combined schools, 41% primary schools and 15% secondary schools. By 2009, there were 2 058 038 learners, 69 233 educators and 5698 schools and in 2013 there were 1 743 319 learners, 59 543 educators and 5 576 public schools in the Eastern Cape (PECE⁵ 2013b). The number of learners increased in 2012 when grade R was placed in ordinary schools.

Table 1: Learners, educators and schools in the Eastern Cape, 2009- 2013

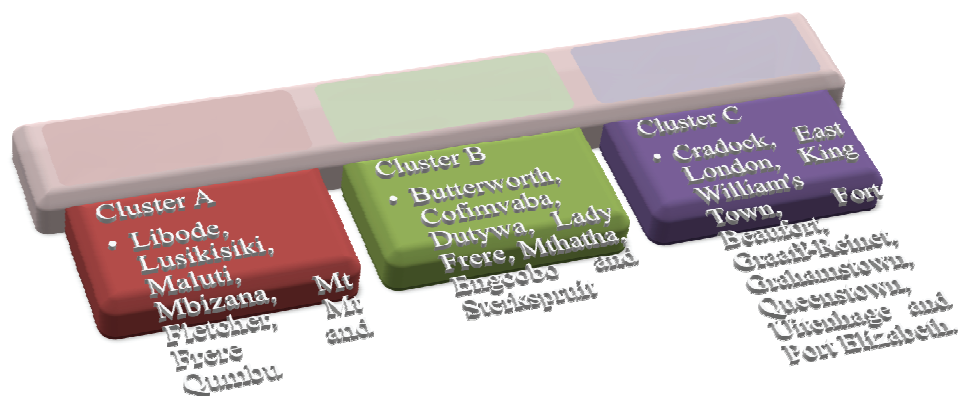
Year	2009	2010	2011	2012	2013
Total no of public schools	5698	5615	5613	5621	5576
	2058038	1968705	1840228	1755003	1743319
Total no of learners in public schools				1932938	1775398
No of learners including grade R	69233	69462	64854	60853	59543
Total no of educators					

Source: Province of the Eastern Cape Education (PECE)

The data in table 1 indicate a continuous drop in the number of schools, learners and educators in the province except for 2012 when the number of schools increased by 7 schools. Table 1 indicate information for ordinary public schools where learners have decreased by 314 719, schools by 122 and educators by 9690 from 2009 to 2013.

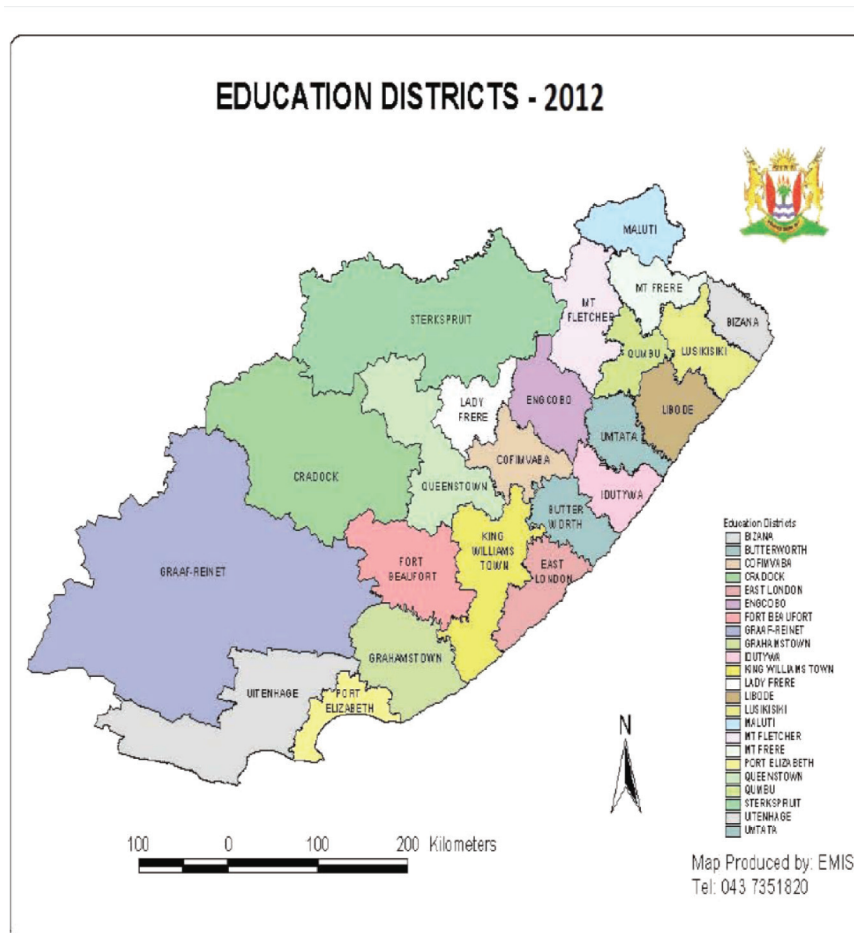
The Department of Basic Education (DBE) in the Eastern Cape functions in a hierarchical style from the Member of Executive Council (MEC), chief directorates, and districts to schools. Eastern Cape schools are grouped in twenty three districts and each district is under the leadership of the district manager who report to the cluster chief directorate in the provincial head office. Map 1 indicates the demarcations of the 23 district districts in the Eastern Cape in terms of the geographic location and land size distribution. The 23 districts are grouped into three clusters that are managed by cluster chief directorates in the Head Office.

⁵ PECE- Province of the Eastern Cape Education



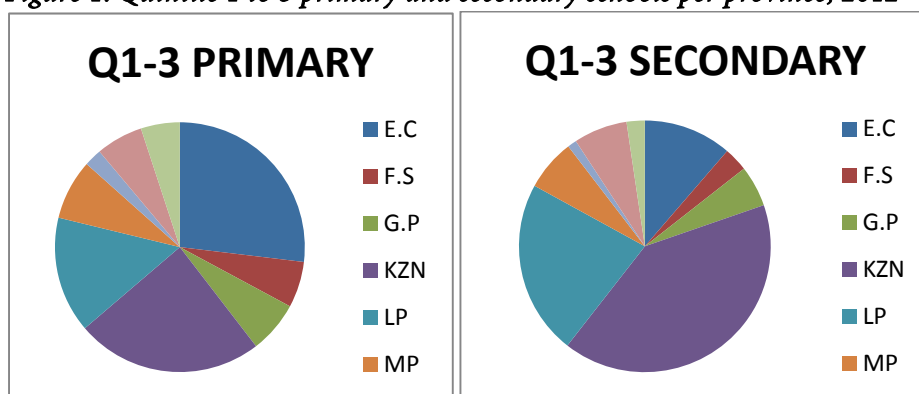
UNESCO reports (see website) show policy interventions such as no fee schools, which although far from ideal in terms of provisions and implementation, is aimed at making the Constitutional provisions of the right to basic education a reality. It is a policy and budgetary response to the need to make education truly inclusive by removing fees as a barrier. The government implements funding policies by funding public schools according to the quintile number ranging from quintile one to five. Quintile one is the poorest school in school resources and community resources; quintile four and five are rich schools. Quintiles one to three schools are declared as no fee schools and are allocated a higher slice in the budget. The Eastern Cape has the highest percentage of schools in quintile one to three (figure 1); hence it is declared as a poor province.

Map 1: Eastern Cape school districts



Source: Province of the Eastern Cape department of Education report 2011/2012

Figure 1 illustrates that the Eastern Cape, KwaZulu Natal and Limpopo are the poorest provinces in South Africa. According to Lemon (2004) the Eastern Cape is characterised as one of the 'poor' provinces because of the following reasons: low level of urbanisation about 42.9% in 2000, high unemployment rate of 32% in 2001 (Lemon 2004).

Figure 1: Quintile 1 to 3 primary and secondary schools per province, 2012

Source: DoE, 2012

Table 2: Percentage Eastern Cape learners in schools per quintile in 2009-2013

Quintile number	2009 % of learners	2010% of learners	2011% of learners	2012% of learners	2013% of learners
1	34	35	35	35	35
2	31	31	31	31	31
3	24	25	28	28	30
4	6	5	3	3	2
5	5	4	3	3	3

Source: PECE, 2013

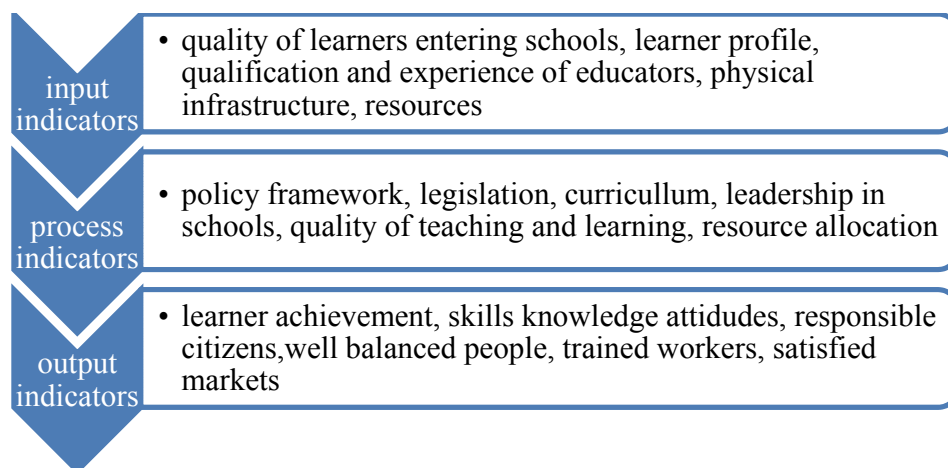
Table 2 indicates that between 2009 and 2013, percentage of learners in quintile one to three were 89, 91, 94, 94 and 96 percent respectively for each year. All quintile one schools except one school in East London were found in Cluster A and B which constituted more than 60% of public schools in the province. This statistics is an indication of the high poverty level in the province; hence the province is labelled as the poor province. As schools are ranked according to five quintiles, to implement the no-fee

schools policy, schools in the lowest quintiles are deemed poor and they may allow learners to enrol without paying school fees. In return, government funds the schools' expenses, which used to be funded from school fees; hence the largest share of government funding is allocated to quintile one to three.

School indicators

Schools are learning institutions that transform input indicators through process indicators into output indicators. Schools perform in a complex education system where unique learners have to be given quality content through well structured processes so as to achieve quality outcomes.

The mind map of the education process at schools:



In an attempt to analyse the schooling outcomes of the Eastern Cape, the output indicator to be discussed is learner performance or learner achievements, and input indicators are learner educator ratios, educator quality, learner teacher support material, learner transport, school infrastructure, and school nutrition programme.

Learner Performance in Eastern Cape Schools

In 1995, the first Education White Paper stipulated that there are few black grade 10 students who choose physical science and mathematics, and these students have an overall low performance in the senior certificate examinations (StatsSA 1996). In 2005, the Department of Education conducted surveys for grade 3 and grade 6 systemic evaluation and reports continued to indicate generally poor performance (DoE 2006b); (Moloi 2005); (Palmer 2004). The Eastern Cape, KwaZulu Natal and Limpopo performed poorly across the three grades 6 learning areas and the results indicated that poor provinces performed worse than richer provinces. As international attention in the last decade and more has focused on calls for schools to improve performance general, and particularly closing learner achievement gaps, the debate around the role by primary and secondary schooling has intensified. New Annual National Assessments (ANA) examinations, common grade 11 and 12 examinations have been established to provide measures of learner achievement.

From 2009 the national Department of Education initiated Annual National Assessment (ANA) which is an examination tool used to measure the level of performance of learners in the GET band in Numeracy and Language skills. Annual national assessment are assessment practices provided by the Department of Education to improve educator assessment methods, for districts to identify where assistance is needed at schools, to encourage schools to achieve more and to report to parents about the performance of learners in the GET band. The tool is used to monitor, guide, control and support teaching and learning in schools and ensures that the syllabus is covered.

ANA was piloted to some schools in 2009 where the assessment was given in grade 1 to 6 and was adopted fully in 2011. The assessment is written by learners in grade 1 to 6 and 9 yearly in September, where the results of grade 3, 6 and 9 are externally moderated by the provincial office (PECE 2014). By 2009, only grade 1 to 6 was piloted to some schools and results were published. By 2011, the Eastern Cape Province has managed to report ANA results from more than 90% of schools (PECE 2014).

There is a decrease of more than 50% in Mathematics from grade 3 to grade 9 in all districts in the Eastern Cape in 2013 as measured by ANA. Districts in Cluster C are performing more poorly compared to the rural clusters A and B. For instance Butterworth, Cofimvaba and Qumbu obtained 27.4%, 22.4 and 22.2 respectively in grade

9 Mathematics in 2013, and Graaff-Reinet, East London and Port Elizabeth obtained 9.7%, 13.3% and 14.2% respectively (PECE 2014). This disastrous trend is analogous to grade 12 Mathematics results. Average % marks in Mathematics decrease as the learner's progress to higher grades and the problem is stronger in secondary schools than in primary schools. This indicates that learners as they progress to higher grade achieve at unsatisfactory level and are not ready for the next phase of schooling. However, the Eastern Cape is doing better in grade 6 Mathematics when compared to other provinces. For instance, by 2012, the Eastern Cape got the same percentage in grade 6 Mathematics with Gauteng province and both provinces came second from the top (DBE 2013b).

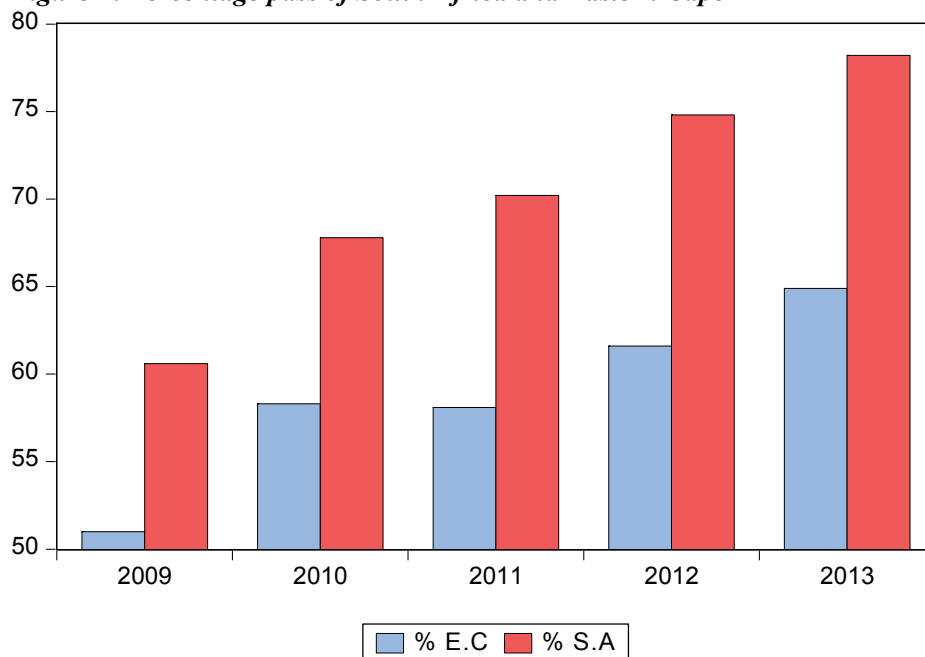
Table 3 provides a summary of ANA for the province from the stage it was piloted from grade 1 to 6 and to a fully fledged assessment that includes grade 9 [grade 3, 6 and 9 are reported]. The results of table 3 show that Mathematics decreases as learner's progress to higher grades from 41% in grade 3, 25% in grade 6 to 15% in grade 9 by 2012 and 51%, 33% and 16% successively in 2013. Although there is a decrease in the performance of learners in languages from grade 3 to grade 9, the situation is worse in Mathematics. In 2009 language was assessed under literacy and there was no differentiation between home language and first additional language. In 2009 learners obtained higher averages in Mathematics compared to language but this trend depreciate as the cohort of learners reach higher grades. The results of 2010 were not published and were not available in the examination department.

Table 3: Summary of Eastern Cape ANA's average percent 2009-2013

	Grade3 MATH	Grade3 HL	Grade6 MATH	Grade6 HL	Grade6 FAL	Grade9 MATH	Grade9 HL	Grade9 FAL
2009	51	45	39	37				
2010								
2011	35	39	29	29	29	35	35	35
2012	41	50	25	38	36	15	43	35
2013	51	47	33	45	43	16	35	34

The grade 12 examination is a well controlled examination that indicates the quality of education and of learning achieved by learners at an exit point of schooling, particularly at secondary-school level (DoE 2009b). The final examination results are moderated by an independent body called Umalusi to ensure fairness and preserve standards. Figure 3 shows a comparative analysis of grade 12 results between South Africa and the Eastern Cape from 2009 to 2013. The percentage difference indicates that the Eastern Cape constantly differs from national by around an average of 9%.

Figure 2: Percentage pass of South Africa and Eastern Cape

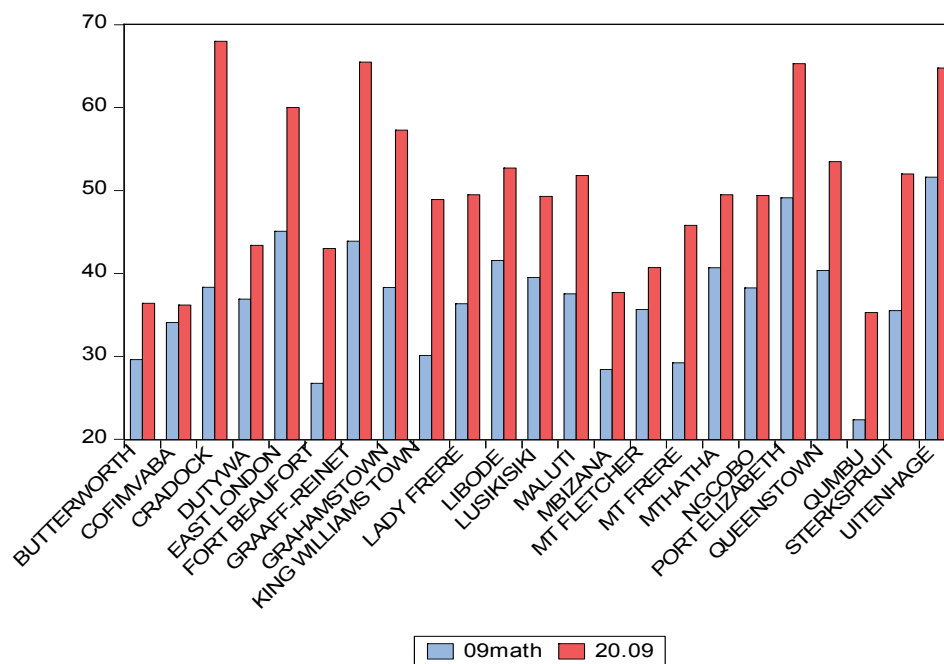


The Eastern Cape has been achieving below 60 % for the years 2009 to 2011, but managed to reach 60% in 2012 and 2013 (figure 2). These results are still far below the average of the country indicating that the Eastern Cape still hold severe apartheid

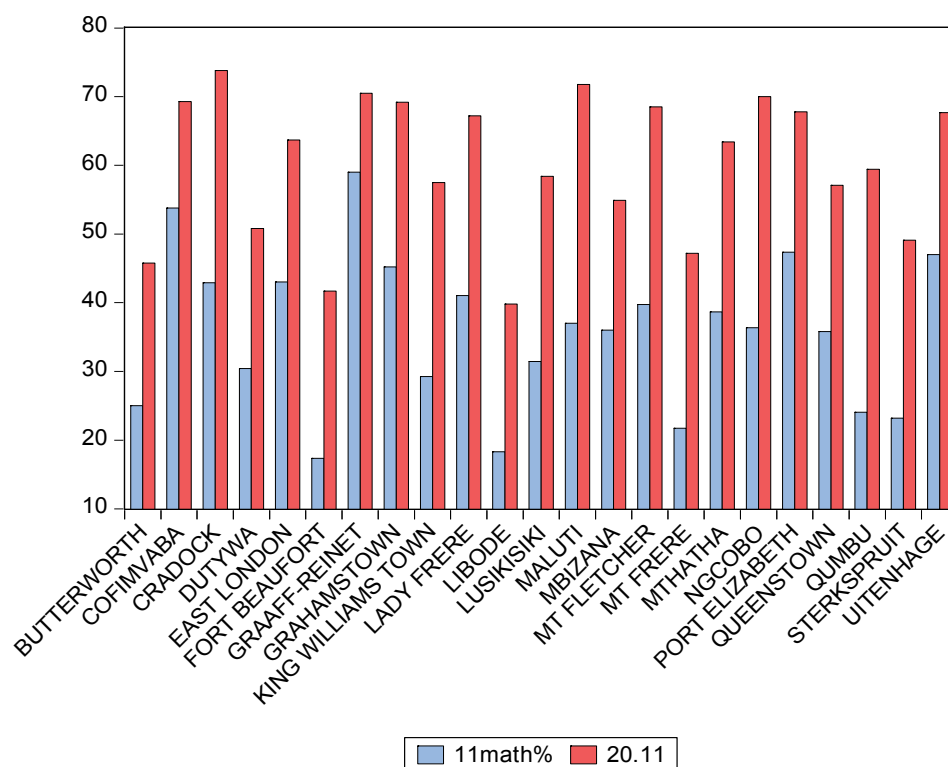
penalties compared to the entire country⁶. However, figure 2 also illustrates a positive correlation between the Eastern Cape and South African results.

Figures 3, 4 and 5 indicate the grade 12 pass rate and Mathematics pass rate per district in 2009, 2011 and 2013. 2009% indicate district pass rate in 2009 and 09math indicate the district mathematics pass rate in 2009 and so forth. King William's Town had improved from 38% to 50% in Mathematics from 2012 to 2013, Mthatha was ranging around 40% in Mathematics but is performing well in grade 12 and Engcobo only reached 43% in 2010 and dropped afterwards to below 40%. Cofimvaba improved from below 40% range in both Mathematics and grade 12 rates in 2009 to above 50% afterwards. Dutywa performs badly in Mathematics but is doing well in grade 12 pass rates over the entire period. The figures generally illustrate that more than 60% of districts are performing below 40% in Mathematics in the period 2009-2013.

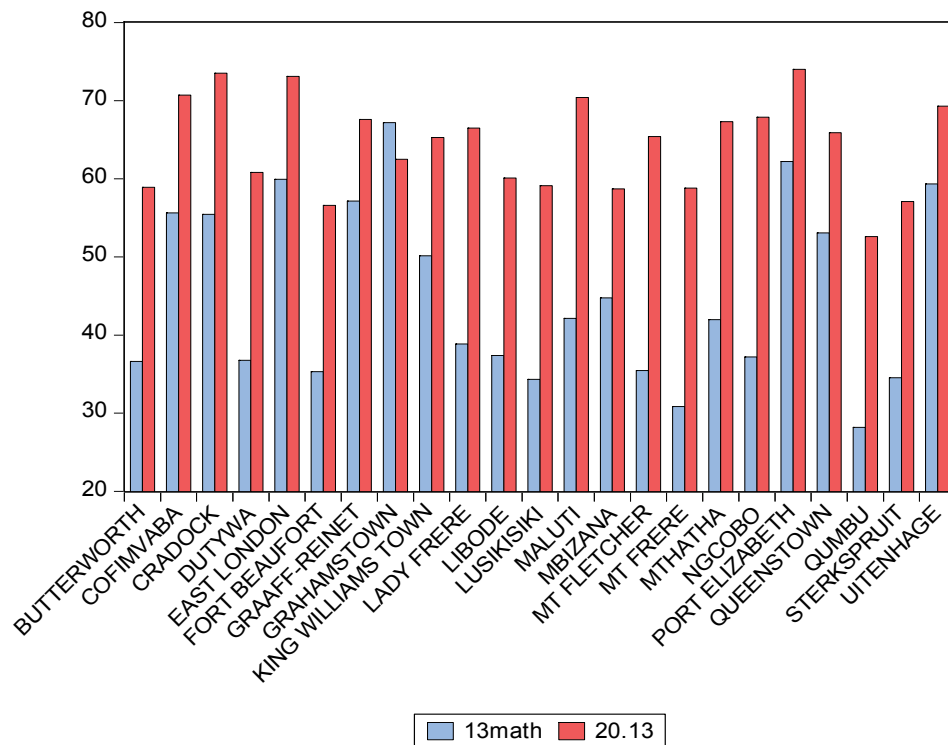
Figure 3: Grade 12 and Mathematics pass rate at district level, 2009



⁶ See forthcoming papers for the analysis of these penalties.

Figure 4: Grade 12 and Mathematics pass rate at district level, 2011

Some districts such as Port Elizabeth (urban), Maluti (rural), and Cradock (farm schools) have maintained more than 70 % pass rates on the period from 2010 to 2013 in the Eastern Cape. Grahamstown, Mthatha, Lady Frere, Engcobo, Uitenhage and East London ranges between 60% and 70% and East London managed to reach 73.1 in 2013. Districts such as Fort Beaufort, Lusikisiki, Mbizana, Mt Frere and Qumbu have always achieved below 50 % contributing negatively to the provincial pass rate. Libode used to achieve less than 50% but improved in 2013 and obtain 60.1% pass rate.

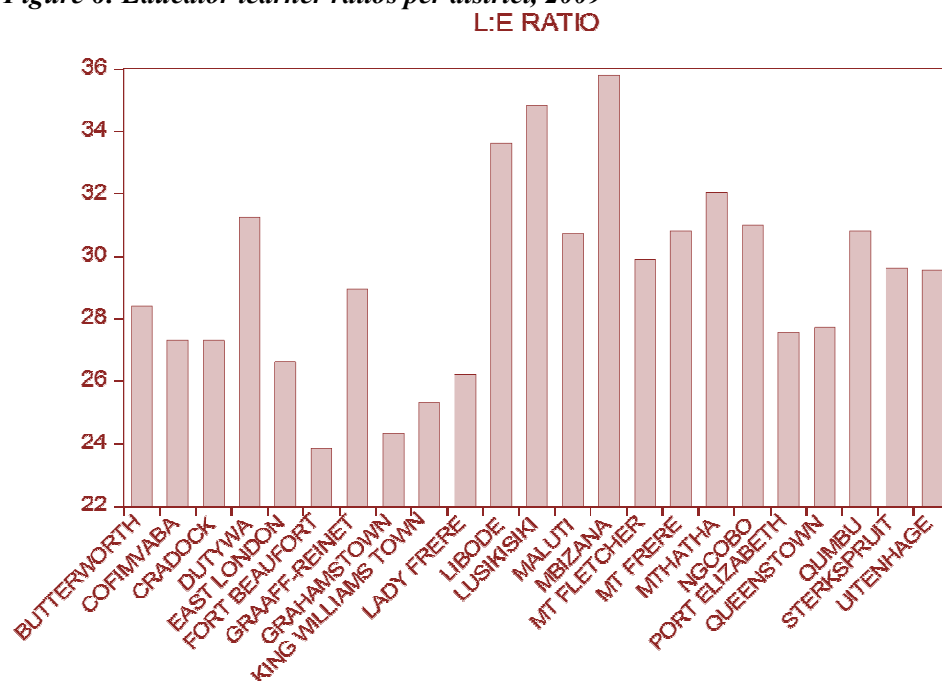
Figure 5: Grade 12 and Mathematics pass rate at district level, 2013

Class Size

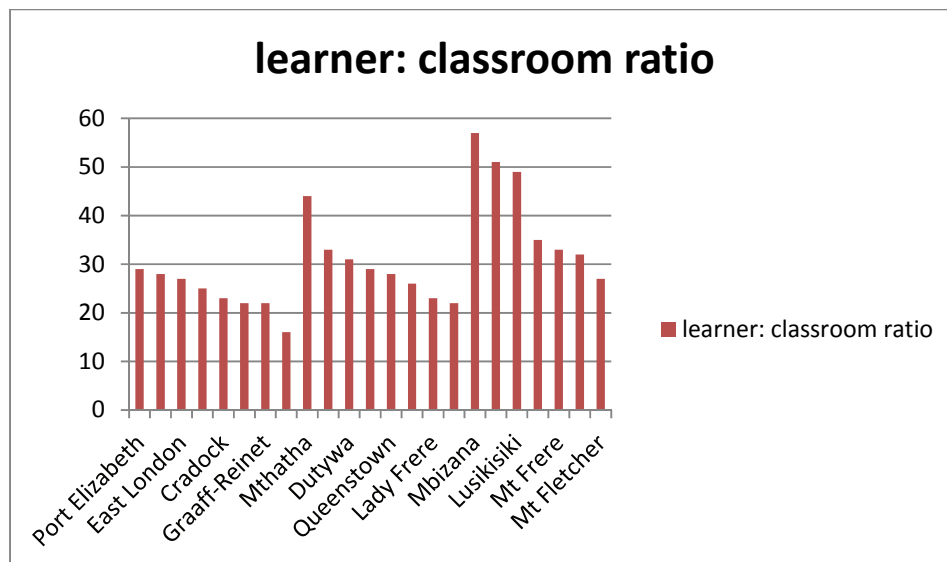
Across literature there are different definitions of class sizes (OECD 2013). For instance, one definition of class size is to divide the number of learners by the number of classes available in a school; another is to divide the number of learners by the number of educators to give the educator learner ratios. The learner educator ratio is the ratio that informs the number of educators that should be allocated in a school in a particular year. The department based allocation and distribution of educators to schools on the agreement which established that learner educator ratios should be 40:1 in primary schools and 35:1 in secondary schools (DBE 2007). However, the educator learner ratio in the Eastern Cape ranges from 1:30 to 1: 32 for primary schools, 1:30 to 1:31 for

combined schools and 1:25 to 1:27 for secondary schools giving an average ratio from 1:29 to 1: 30 in the period 2009 to 2013.

Figure 6: Educator learner ratios per district, 2009



The educator learner ratio per district indicates that Mbizana has the highest ratio of 1:36 and Fort Beaufort the lowest ratio of 1:24. The patterns shown by figure 6 are important because they show that there was an unequal distribution of educator learner ratios in 2009 with highest ratios in cluster A and lowest ratios in cluster C districts. It should be interesting to investigate how this significant input component could affect learner performance (forthcoming papers) as it is at the heart of policy debates in the allocation of resources in many countries (Angrist & Lavy 1999); (Bhorat & Oosthuizen 2006).

Figure 7: learner classroom ratio by 2011

The inequalities were further illustrated by figure 7 where learner classroom ratios in 2011 ranged from 1:17 to 1:29 in cluster C, 1:21 to 1:43 in cluster B and 1:27 to 1:55 in cluster A (figure 7). Eastern Cape, more especially cluster A is known by overcrowded classroom which may strain the quality of teaching and learning and ultimately impact on learner performance.

Educator Quality

Efforts to improve and transform education allocation and governance rest on professionals in the education sector (Nyambi 2004); (Jacob & Lefgren 2004). Education is a complex system that involves multiple stakeholders, multitask job, learner ability and effort, educator efforts and attitudes and classroom environment. The successful implementation of government's education system requires a broadened and strengthened professional base of educators to execute a learning process at schools (Ngidi 2004). The learning process requires educator to pay attention to multiple modes of instruction that involve teaching core academic subject; non-core academic subjects such as art, physical education and music; career development, co- and extracurricular

offerings; human growth and development (Diaz 2003). Therefore educator quality in this paper is reflected by educator qualifications, salaries paid to educators and educator management skills at schools.

Educator qualifications constitute an important policy issue in South Africa and affects educator quality. A qualified educator has grade 12 certificates with a three year professional training in teaching (teacher diploma) and is placed at REQV⁷ 13 or grade 12 certificates with a four year degree in education and is placed at REQV 14. Educators with an education four year degree or a three year education diploma plus Advanced Certificate in Education constitute REQV 14. A three year diploma or four year degree outside the field of education is not considered for educator qualification unless supplemented by one year teacher training. This means a degree outside education must be accompanied by a post graduation diploma in teaching which is offered at universities. The Eastern Cape had a significant number of about 45% under-qualified educators with the mean qualification of REQV 12 with standard deviation of 1.9 in 2013 (Ncanywa 2014) .

In the current education system the provincial budget allocate more than 80 % to payment of educators (PECE 2013a). Educator salaries are informed by educator qualifications and educator experience, as the more qualified and experienced the educators are the more it is costly for the government to pay them. The more qualified and experienced the educators are, the more productive they are. Educator salaries are a measure of educator quality as they are informed by both educator qualifications and educator experience. However, the Eastern Cape had a significant number of educators with more than ten years experience in 2013 (Ncanywa 2014).

In South Africa, there have been different payment models to educators since 1994. From 1994 to 2000, the payment system addressed issues of gender and inequity problems with the emphasis to increases in qualification (ELRC 2011). Then beyond 2000 there was a change of emphasis to associate payment with performance, but this had many challenges. In April 2008, there was an agreement between the Department and the teacher unions called 'A Framework for the Establishment of an Occupation Specific Dispensation (OSD) for Educators in Public Education'.

⁷ REQV-Relative Education Qualification Value; ELRC- Education Labour Relation Council

OSD allows progression within the system and improve career opportunities. This system includes rewards for satisfactory, good and excellent performance; allocate incentives to experienced and scarce educators so as to retain them in the classroom (DBE and HET 2011). This payment structure allows progression of educators without promotion into management posts. There was no full implementation of OSD in the Eastern Cape as there were shortcomings on performance related salary increases and teaching and learning specialist posts (ELRC 2011). This resulted to movement and progressions being slow as there were many notches in a salary level that increased at a rate of 1%. The government is still in the process of fully implementing OSD so that it serves what it was designed for.

While it is difficult to access numerical data to demonstrate poor time management skills in both principals and educators at schools, other researchers confirmed that educators dodge lessons but present in school; abscond from classes; are absent from school without any valid reason; engage in abuses; do shoddy work; and neglect children in classrooms (Taylor 2009). Some schools do not continue studies after break resulting to learners loitering around the school or breaking out to the community in school hours, implying there are few hours dedicated to adequate teaching and learning (Maile 2006).

Educators engaged to these kind of activities adheres to poor management skills at both the school and district level as it indicates that there is no monitoring on what is happening at schools. The school management teams (SMT) should focus on maximising time for teaching and learning activities and promote systems that improve learning. The department should provide support to schools by promoting initiatives such as mentorship, learned societies like Maths and Science Associations, professional support by professional bodies such as South African Council of Educators (SACE). The district can also exercise strict control measures to educators who are not doing their job and yet are paid. In other words, the remuneration should be based on performance and the teacher unions should support performance based salaries and fight for good working conditions.

Educators in the Eastern Cape complained about a number of issues that affects the quality of service they provide to schools (DoE 2006a). The department Report on Integrated Planning for Educators also confirm a number of challenges faced by educators. Some of these issues are:

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- Conditions of service are poor in terms of salaries, benefits, incentives, development opportunities and support.
- Policy and work overload as there is too much paper work and administration
- disintegration of discipline
- lack of facilities, more especially in the teaching of sciences and languages as there are no laboratories and libraries
- large class sizes, more especially in cluster A and B
- poor parental participation as most parents are illiterate and cannot help learners with homework
- Role conflicts, favouritism and nepotism as schools have poor management skills.
- Redeployment processes, listing of excess educators or those with redundant teaching subjects and post provisioning systems
- Temporary educators in permanent positions
- Transformation uncertainty in introduction of new curriculum with no sufficient training or adaptation.

Learner Transport

The demographic arrangement of the Eastern Cape resulted to schools being scattered further apart from each other and sometimes far from where people live. Most of the secondary schools are more than 5km from the learner's homes. The Department of Transport in 2003 conducted a survey and revealed that, nationally, 25% of primary school learners and 36% of secondary school learners walked longer than 30 minutes or about three kilometres in one direction. The Eastern Cape Provinces is among the provinces that were found to have a high proportion of learners walking longer than 30 minutes to reach their education sites (Commission 2009). In other areas there is no available transport to take learners to school, or there is no travelling fare if transport is available because parents are unemployed. These learners walk long distances to school

and often arrive at school late, hungry and tired making them unable to concentrate fully on their schoolwork. In most areas they have to walk in bushes and are unsafe and learners may be exposed to possible attack including sexual harassment. Special transport difficulties are faced by disabled learners (DoE 2006b).

Table 4: No. of learners benefiting from transport in the Eastern Cape:

Year	2009	2010	2011	2012	2013
No of learners	92194	117000	128700	141570	-
% of learners	4.4	5.6	6.5	7.4	-

Source: PECE

The Department of Education provided free transport to learners who travel long distances to schools. The percentage of learners that benefited from free transport gradually increased from 4.4 % in 2009 to 7.4% in 2012 (table 4). This increase the number of learners that can access education in rural areas, as some parents would hold their kids until they are old and strong enough to walk those distances. Some parents would refuse to allow female kids to attend school and claim safety and long distance walks as a problem. The challenges to transport provision in the province have resulted to the transfer of this service to Department of Transport by 2011. The applications for learners to benefit from free transport are administered by the Department of Education, but service providers are handled by Department of Transport.

School Infrastructure

Schools infrastructural development refers to building of new schools, renovation of existing schools and ensuring the expanded provision of services such as electricity, water, toilets and telecommunication connections. In 1996, there was an establishment of the School Register of Needs which failed to provide adequate information to deal with continual changes in schooling and education provision. This register was replaced by the National Education Infrastructure Management System (NEIMS) in 2005 which provided an effectively management and monitoring tool for infrastructure. The NEIMS

is a comprehensive infrastructural database for all public schools, public ECD centres, public ELSEN centres, public adult basic education and training (ABET) centres and education offices operated by the departments of education in South Africa. Provincial quarterly reports on progress of infrastructural development are recorded in this national database.

Between 2009 and 2011, there was no virtual change in infrastructural development in the Eastern Cape (see table 5). The table indicates a limited supply of items like laboratories, libraries and computer centres which range around a shortage of 90%. Schools where there is availability of libraries and laboratories are those in the former model C, and few Dinaledi schools. Table 5 also indicate that there is no virtual change in items such as electricity, toilets, water supply, fencing, sport facilities and communication systems (NEIMS 2009). These items have shortages between 2% of communication systems to 25% of water supply (table 5). The communication system has developed due to the availability of cell phones in the whole country. However, with other forms of infrastructure, progress was less satisfactory.

Table 5: Eastern Cape infrastructure in 2009 and 2011

Infrastructure item	% not supplied 2009 (from 5715 schools surveyed)	% not supplied 2011 (from 5676 schools surveyed)
Electricity	23	22
Water	25	25
Ablution	10	10
Fencing	20	20
Libraries	90	90
laboratories	91	91
Computer centres	90	89
Sports facilities	7	7
Communication system	2	2

Source: DoE, 2009 & 2011

In the Eastern Cape annual report 2012/2013, it was reported that targets for infrastructural development were not met due to unavailability of electricity grids in areas where projects should be implemented and delays due to rain for provision of water and sanitation facilities. There were no comments given for the province not to reach the target of building libraries and media centres (PECE 2013b). The backlogs were concentrated in the eastern part of the province in cluster A and B which are the former homelands. This is alarming to inefficiency in the infrastructural side as these items that have a significant contribution to performance of learners and quality of results (Bhorat & Oosthuizen 2006).

School Nutrition Programme

The education system nowadays is challenged by the complexity of societies in terms of access to education, past unequal distribution of resources and high levels of poverty. The government allocates funds according to the learner needs and the most disadvantaged, poor learners are allocated more to overcome the persistence of disparities between communities. Due to the large Black population of learners who are leaving below the national accepted poverty levels, the Eastern Cape is benefiting from the National School Nutrition Programme (NSNP) which is a national programme to mitigate impact of poverty on learners. It is difficult for educators to teach hungry learners or learners that do not get nutritious meals. Most of the learners in rural areas depend on social development child grant or pensioners grant for food. These funds do not manage to buy nutritious food and therefore the NSNP provide healthy meals at school. Learners can perform well if they are healthy, well nourished and ready to learn, supported by their families, communities and educators (Ludwig et al. 2007). The programme is not providing schools with healthy food only, but also contributes to regular attendance of learners.

The national government, in the Division of Revenue Act 2008/2009, allocated a budget of approximately R1.6 billion for school nutrition to provincial departments of education as conditional grant (DoE 2009a). The nutrition fund is transferred to school's bank accounts and School Governing Bodies are mandated to run the programme.

Table 6: % Learners benefiting from nutrition in the Eastern Cape from 2009- 2013

Year	2009	2010	2011	2012	2013
No of learners	1006443	1450000	1572402	1633664	1571580
% of learners	48.4	70	79.5	85	95

The nutrition programme is provided to schools with the poorest learners, therefore it is provided to quintile 1 to 3 schools (table 6). The nutrition programme began in 2009 by providing nutrition to 48.4% of the learners in quintile 1, 2 and 3 primary schools. In 2010, quintile 1 secondary schools followed increasing the percentage to 70 %, and in 2011 quintile 2 secondary schools were included until 2013 when all quintile 1 to 3 schools were provided with nutrition. In 2013 the Eastern Cape reached 95% of learners provided with nutrition. The government has exceeded its target of providing nutrition to 60% of the poorest learners. One of the reasons is that learners in quintile 1 to 3 primary schools are as poor as those in quintile 1 to 3 secondary schools. So the nutrition programme is the necessary resource to address poverty and equity issues.

The nutrition programme is intended to addresses the poverty status of the learners in poor schools and does not only contribute to learner performance, but also contributes towards local economic development and job creation. There are service providers, community-based small, micro and medium enterprises, and community-based co-operatives that are contracted in the programme. Schools employ at least one food handler per 200 learners in a school and provide a kitchen to keep the provided cooking utensils. All schools participating in the NSNP are encouraged to keep a vegetable garden, so that fresh vegetables can be harvested and be supplemented. The NSNP is monitored by the districts that report monthly to the head office.

Learner Teacher Support Material (LTSM)

The procurement of learner teacher support material (LTSM) is done at schools for section 21 schools and at the district office for section 20 schools according to the Norms and Standards for School Funding (DoE 2003). For section 21 schools funds are deposited in the school bank account and section 21 schools follow a paper budget to purchase textbooks and stationery. Then for section 20 schools, schools are informed by

the Department of the next financial year budget for planning. After receiving the paper budget they place their orders with the department, which then procures and distributes textbooks to these schools. The department provides a catalogue to schools so that they order textbooks that align with the National Curriculum Statement. The department monitor all publishers to publish learner teacher support material in compliance with the National Curriculum Statement (NCS) for all phases in all 11 official languages. There was no deviation in target and actual expenditures on learner teacher support material in the province which indicates that schools are well resourced in this regard (PECE 2013b).

Conclusion

The paper discussed the trends of education input indicators that can be transformed into outputs or outcomes in the Eastern Cape Department of Education for the period 2009 to 2013. The province had high levels of poverty as about 95% of schools were in quintile 1 to 3 by 2013. The government attempted to address the poverty status through the declaration of 'no fee schools' and provision of nutrition programmes to quintile one to three schools. As much as the province was doing well on learner teacher support material, school nutrition and learner transport, infrastructural development was in stand still. Between 2009 and 2011, there was no virtual change in infrastructural development in the Eastern Cape (PECE 2012). There was a limited supply of items like laboratories, libraries and computer centres at schools which ranged around a shortage of 90%. The department provided reasons for not meeting targets as due to unavailability of electricity grids in areas where projects should be implemented and delays due to rain for provision of water and sanitation facilities.

There has been decline in learner performance as learner progress to higher grades and a drastic decline in important subjects such as Mathematics. Many learners in grade 10 shift from Mathematics to Mathematical Literacy which is an easier version of Mathematics. This means the province is not producing matriculants that can choose engineering, science and commerce related careers, hence poor quality of results. This poor quality can be attributed to a number of factors such as lack of computers, inadequate teaching and poor educator qualities (Taylor 2009).

The government supported the training of Mathematics educators by providing bursaries to study at universities or subsidising workshops and certificates to empower educator qualifications. Nevertheless, the challenge still remains as learners are

performing poorly especially in Mathematics, Science and Accounting. The government also faced a challenge of paying educators offering these subjects rural school allowance as a mechanism to retain them. Even the Occupational Specific Dispensation (OSD) payment system was not yet fully implemented to reflect issues of performance and accelerate progression rates that could satisfy educators.

The researcher has the following recommendations to resolve some of the challenges in the provincial schooling system.

- The government should improve infrastructural developments, more especially to rural schools to attract and retain educators working in those areas. Roads, electricity, toilets, fencing, laboratories and libraries should be treated as a matter of urgency.
- Expenditure on learner teacher support material should include purchasing of calculators and laptops or computers for e-learning and these should be included in the catalogues provided to school as schools are mandated to choose from the catalogues.
- Managers at all education levels should be empowered with management skills to exercise monitoring and control and assure that there is effective teaching and learning. The slogan by the Minister of Basic Education should be practiced which says 'teachers must be at school in time, go to their classrooms in time and teach.' Another slogan says 'managers must manage, teachers must teach and learners must learn.'
- The department should provide support to inexperienced and low skilled educators by starting mentorship programmes, teacher associations and regular workshops to empower them in the subjects they are teaching.
- The government should provide funds for the full implementation of OSD so as to encourage the performance based salary scales to motivate educators.
- The department of education should provide rural allowance and allowance to educators teaching Mathematics and Sciences. This could be a retention policy and could also attract more educators to the teaching career.

- The department should form partnerships with all the universities in the province so as to provide an ACE programme for FET educators in Mathematics, Science and Accounting.

Education in schools should be provided in a manner that ensures learners can benefit from it, so that they can realise their potential and aspirations. School processes need trained educators to use learner centred approaches in well managed classrooms and schools to facilitate learning and reduce societal disparities. The schooling system should provide quality content that reflects curricula for acquisition of knowledge, skills and values; with outcomes that are linked to national goals and objectives and positive participation in society.

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AUTHOR'S CONTACT:

NCANYWA T.
Department of Economics
University of Fort Hare
Alice, South Africa
Email: TNcanywa@ufh.ac.za