



## **School Based Factors Influencing Pupils' Examination Performance in Maswa District**

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### **Abstract**

*The study on pupils' school-based factors influencing pupils' examinations performance was conducted in Maswa district involving 138 respondents. The study intended to examine school based factors that influence pupils' performance in examinations. Primary data were collected through structured interviews and focus group discussions from pupils, teachers and parents using structured questionnaire and checklist. The collected data were edited, coded and entered into IBM-SPSS version 20 spread sheet, then cleaned and verified prior to correlational and content functional analysis. The study found that pupils-book ratio, pupils - desk ratio, pupils - teacher ratio, pupils-pit latrine ratio, pupils' classroom ratio, and pupils' learning environment adversely affected pupils' examinations performance except teachers' commitment. The study concludes critical policy issues as stated in the National Education Policy are not implemented in public primary schools. The study recommends that school boards should work on the possible means to implement the educational policy issues as stated in the National Education Policy of 2014. Employers should employ quality teachers with professional skills motivate them by giving opportunities for career development, remunerating in the sense of total compensation payments, bonuses, and the like.*

**Keywords:** Examination performance, school pupils.



## **1.0 Introduction**

Students' examinations performance is a great challenge as far as quality education is concerned. While in some countries students perform better, in others they do worse. The Organization for Economic Co-operation and Development (OECD) Program for International Students Assessment (PISA) announced the results of the survey of education performance in 2010. The survey was conducted in over 70 of developed countries in the world and surveyed half a million 15 year aged students. The survey consisted of reading skills, mathematics and sciences. The OECD tested student's preparedness for future challenges and ability to analyse issues and effective communication. Hong-Kong China, Korea and Finland were ranked top 3 in reading skills. The next rankings for reading were; Singapore, Canada, New Zealand, Japan, Australia and Netherlands. Students do well regardless of their socio-economic background. High performing school systems were observed to prioritize teacher with high pay over small class sizes. Schools with good discipline and better student-teacher relationships were observed to do better and the percentage of students who "read for pleasure" dropped from 69% in 2000 to 64% in 2009 (Kasia, 2010).

Relatively, the performance of South African schools, for instances, indicating that some 80% of schools were highly ineffective, produced only 15% of higher grade (HG) passes in mathematics in the Senior Certificate (SC) examinations, compared with 66% produced by only 7% of the country's top performing schools (Moloi and Strauss, 2005; Howie *et al.*, 2007). The results in various studies vary between countries, Southern Sahara countries including Tanzania were observed to perform poorly compared to the rest of Africa. Tanzania in particular, Statistics show that, there is a decline in performance among primary seven school leavers recorded at 70.5% in 2006, 54.2% in 2007, 52.7% in 2008 and 49.4% in 2009 (Sunday, 2012). There is also disparity between geographical regions; Dar es Salaam region for example had the highest pass rate (69.8%) while Shinyanga region had the lowest (31.9%) in 2006. National examination performance also was observed to vary between males (55.6%) versus females (43.2%). This disparity existed to some degree in every region in Tanzania. This problem results into increase of illiteracy rate. Literacy rate in Tanzania by 1970s was 85% but had dropped to 69% by 2009 which means that only 15% of adults in the country could not read and write in the 1970s while in 2009 the percentage had risen to 31%. This shows that the illiteracy problem increase with time, as the results the whole Tanzania suffers from poverty, ignorance as well as health problems while Women and Children suffer the most.

In spite of subsequent strategies taken by the Tanzania government to provide quality education to all people by the use of resources it has, a significant proportion of pupils and students do fail in final examinations of the two education cycles in Tanzania. We can ask



ourselves why this? Despite of the implementation of various educational programs including Primary Education Development Programme (PEDP: 2002-2011 for the two phases), which express various objectives to realize good performance. But still Pupil's performance in national examinations went on being poor. The 2002-2011 education Statistics show that, with an average of 64.1% for all candidates sat for standard seven examinations in Maswa District failed every year (MoVET,2008; Umameh, 2013). This is a critical education problem Maswa district because, large number of pupils failed do fail in the final examinations, while we expected more pupils to perform better ever since the teaching and learning environments are nourished, through increased number of qualified teachers, construction of an infrastructures and increased teaching and learning materials in schools. Therefore, what makes pupils' perform poorly in examinations was the interest of this study.

Poor performance among the primary seven leavers remains a major challenge in Maswa district educational sector. An average of 64.1% of primary seven leavers in Maswa district has been reported to have failed in in final examination every year between 2002 and 2011 (MoVET, 2008; Umameh, 2013). In spite of strategies taken by the government to ensure high education performance among pupils, the performance continues to decline as the time goes on. Examination performance among pupils was expected to be improved by the use of different potentials, opportunities and the resources available, still students yearly fail in their final examinations. District education report shows that, level of pupils' examination performance in Maswa district dropped up to 31.5% in 2011 when compared to 72.5% in 2006. National wise, it has dropped from 70.5% in 2006 to 49.4% in 2009 while the average performance rate of Maswa District was about 35.9% (MoVET, 2008; Umameh, 2013). These statistics show that there is a serious examination performance problem in Tanzania in general and in Maswa district in particular, in spite of successful implementation of Primary Education Development Programme (PEDP) in the country. The problem affects not only the education sector but also social, technological, economic and political aspects of life. Children are the most affected by the problem, severity of illiteracy rate for the long time may greatly cause lack of knowledge and skills of a community necessary to function as a literate and numerate member of the broader society. A number of factors could easily be hypothesised, but the extent to which each of these factors accounts on pupil's performance in Maswa is not clearly documented. This study, therefore, intends to examine school-based factors that influence pupils' examination performance in Maswa District.



## 2.0 Materials and Methods

The study was conducted in Maswa district being one of the adversely affected districts by primary seven leavers poor examination performance compared to other districts. A cross-sectional research design was the major approach used to come with required research results. The approach was preferred because the study involved collection of data from different respondents at one point at a time. *Structured interview was the major method used to collect data from teachers, pupils and selected educational officers.* Focus Group Discussion (FGD) was also used to study factors that influenced pupils' examination performance within the study area; the discussions were conducted in different groups of teachers and parents which consisted of 8 respondents.

The study involved four primary schools selected purposively: two of them had good performance (Dekapoli and Binza) while the rest two were the poorly performing (Buyubi and Mwabuki). The study involved 138 respondents, 92 being pupils, 39 primary school teachers and 7 key informants. This sample size was estimated by using Yamane (1967) formula given as is  $n = N / [1 + N (e)^2]$  where  $n$ =sample size estimate = 140  $N$ =sampling frame=study population.  $1$ = constant and  $e$  = error of the prediction=10%.  $n = 1251 / [1 + 1251 (0.1)^2] = 92$  Students.  $n = 64 / [1 + 64 (0.1)^2] = 39$  Teachers. Seven were key informants who purposively selected and provided information related to educational performance in their area of which four of them were Head teachers, one was an educational officer and two of them were the Ward Educational Officers.

Simple random sampling technique was used to select teachers and pupils from the four selected primary schools, while purposive sampling was used to select schools and key informants. Collected primary data were edited, coded and entered into IBM- SPSS Version 20 spread sheet, cleaned and verified prior to analysis. Processed primary data were analysed by using SPSS, in which descriptive and inferential statistics such as percents were computed. Correlation analysis was also performed to capture relationship of variables studied. Content functional analysis was used for qualitative data generated from FGDs which revealed critical issues that adversely affected pupils' examinations performance in Maswa District.

## 3.0 Results and Discussion

Several factors were assumed to influence examination performance both positively and negatively. Such factors included distance to and from the school, teaching and learning methods, teacher's commitment, pupil's book ratio, pupil's desk ratio, pupils - teacher ratio, pupils-pit latrine ratio, pupil's classroom ratio, time use by teachers and pupils. The extent to which different factors influence pupils' examination performance was captured when respondents (teachers and pupils) were asked to provide their views on variables that



influence pupils' examination performance. From the list of factors that were established, respondents were asked to respond to each possibility, the responses were correlated with pupils' performance in annual and terminal examinations to capture relationship between the variables. The spearman's rank correlation coefficient was used to determine the relationship between study variables.

Results in Table 1 reveal that pupils' poor performance in examination in Maswa district is basically caused by school-based factors like distance to schools, pupils spending more time in travelling to schools hence get tired, unfavourable learning environment, pupils' book ratio, pupils desk ratio and pupils latrine ratio. However, correlation of such variables to pupils' performance was not significant ( $P>0.05$ ). This implies that the longer the distance to and fro the school, the more the time spend by pupils in travelling, increasing unfavourable learning and teaching environment and the fewer the books, desks and latrine services in schools negatively impacts pupils' performance in examinations. The study also observed that only teachers' commitment had significant ( $P<0.05$ ) positive influence on pupils' examinations performance

**Table 1: Factors influencing pupil's annual examination performance**

Factors		Average score in terminal examination (%)	Average score in annual examination (%)
Distance to and from school (km)	Pearson Correlation	-0.1	-0.1
	Sig. (2-tailed)	0.4	0.3
	n	99	99
Time spent on travel to and or from the school	Pearson Correlation	-0.1	-0.1
	Sig. (2-tailed)	0.4	0.5
	n	99	99
Pupils' learning environment (index)	Pearson Correlation	-0.0	-0.0
	Sig. (2-tailed)	0.9	0.9
	n	99	99
pupils' book ratio	Pearson Correlation	-0.0	0.0
	Sig. (2-tailed)	0.6	0.6
	n	99	99
Pupils' teacher ratio	Pearson Correlation	0.0	0.1
	Sig. (2-tailed)	0.9	0.4
	n	99	99
Teacher's commitment (index)	Pearson Correlation	0.2*	0.3*
	Sig. (2-tailed)	0.0	0.0
	n	99	99
Pupils' desk ratio	Pearson Correlation	-0.1	0.0



Factors		Average score in terminal examination (%)	Average score in annual examination (%)
	Sig. (2-tailed)	0.6	0.7
	n	99	99
Pupils' pit latrine ratio	Pearson Correlation	-0.1	-0.0
	Sig. (2-tailed)	0.3	0.9
	n	99	99
Teaching environment (index)	Pearson Correlation	-0.1	-0.0
	Sig. (2-tailed)	0.3	0.9
	n	99	99

**\* Correlation was significant at the 0.05 level (2-tailed)**

Although the results for most of the variables were not significant they show the magnitude and direction of influence (Table 1). Therefore, variables like distance to and from school, time spent on travel to and or from the school, pupils' learning environment, pupils' pit latrine ratio and teaching and learning methods were negatively correlated with pupils' examinations performance. These results concur with Nzabihimana (2010) and Solar (2013) whose observation on the school performance identified a number of factors which affect students' performance in examinations. The observed factors include previous student attainment, Socio Economic Status of the student, School size, number of students in schools, school location (rural/urban) school ownership (public or private). Additionally, this study noted further that, factors like number of pupils in schools, learning environment, pupils' pit latrine ratio and teaching and learning environment influence the examination performance of the pupils. Thus, when someone deals with pupils' academic performance should take into account the stated factors influencing performance of individual pupils and the schools in general. Therefore, there is an urgent need for the government to work upon school infrastructures like classrooms, employing enough teachers and making follow up for them to deliver accordingly. There should also be an urgent need for parents to be more supportive towards their children in academic related matters. This implies that the parents have to give adequate academic support to their children; the parents through Parents Association/meetings should ensure that schools have the necessary facilities and equipment needed for effective teaching and learning in schools. Since there is no cost sharing in the provision of primary education, the government should continue providing adequate teaching and learning resources in all public primary schools (Considine and Zappala, 2002).

URT (1995) recommends that pupils' book ratio should not exceed 1:1 and pupils' teacher ratio should not exceed 1:45. In the case of toilets, it varies between boys and girls



whereby the ratio for boys was 1:25 while girls should be 1:20. It was also expected that pupil's desk ratio should be 1:1 and the class should not exceed 45 pupils. However, it was observed in the study area that such education policy issues are not implemented in most of the public primary schools as reflected in Table 2.

**Table 2: Books, teachers, toilets, and desk- students ration**

Primary school name	Book students ratio	Teacher students ratio	Toilet students ratio	Desk students ratio	Classrooms students ratio
Binza	1:10	1:36	1:90	1:6	1:39
Dekapoli	1:2	1:14	1:24	1:1	1:24
Buyubi	1:26	1:64	1:80	1:17	1:60
Mwabuki	1:18	1:68	1:76	1:12	1:67

The results in Table 3 show that schools supplied with adequate number of books, teachers and enough classrooms were academically performing better than those without such services. This implies a positive relationship between the presence of enough books, teachers and classrooms and pupils' academic performance as shown in Table 3. Therefore, the existing pupils' poor academic performance today is a function of a series of interrelated factors and this observation is supported by Nzabihimana (2010) who argues that, education is a very costly project for nations and individual families; therefore, it is very crucial to understand the factors affecting its provisions and the performance of the learners. Nzabihimana (2010) further states that, majority of studies on student academic performance have related student performance to various aspects of education, such as school quality, teaching quality, teacher remuneration, class size, and learners' characteristics of which have to adequately be managed for pupils to perform better in their studies.



Table 3: Books and students ratio per subject

SCHOOL NAME	Mathematics	Science	English	Kiswahili	Geography	History	Vocational skills	Personality & Sports	Civics
Binza	1:3	1:5	1:5	1:4	1:7	1:7	1:12	1:39	1:5
Dekapoli	1:6	1:10	1:2	1:2	1:10	1:10	1:12	1:12	1:12
Buyubi	1:4	1:3	1:3	1:5	1:15	1:12	1:15	1:14	1:14
Mwabuki	1:7	1:5	1:1	1:6	1:13	1:10	1:14	1:21	1:12

Darling-Hammond (2000) observed that measures of teacher preparation and certification are by far the strongest correlates of pupil's achievement in reading and doing mathematics. Coombs (1970) listed four important factors including the acute scarcity of instructional resources that constrain educational systems from responding more fully to new educational demands. In order to meet the emerging crises in education, educational systems need comprehensive and implementable policies and well as real resources like money to raise its quality, efficiency and productivity. The schools will need buildings of different types for different purposes like laboratory works, equipment and more modern adequate learning materials.

Momoh (1980) as cited by Nzabihimana (2010) studying on the effects of instructional resources on students' examination performances in Kwara State correlated material resources with students' academic achievements. Information was collected from the subject teachers in relation to the resources employed in teaching. The students' subject's performance was related to the resources available for teaching each of the subjects. He observed that material resources had a significant effect on students' academic achievement in each of the subjects. Thus, if organizations, institutions, parents and even government in general create conducive environment to the learners and teachers by all the possible means successful results to pupils' performance can be in the expected status. Teachers should be committed to perform their daily teaching activities accordingly to help pupils perform better. Furthermore instructional materials supplement teachers' verbal explanations and hence make learning process richer since both learners and teachers are exposed to several learning activities (Olajejo and Olosunde, 2011).

The FGDs revealed a number of critical issues that affected pupils' examinations performance in Maswa district. Most of the schools in the Maswa district face a financial



crisis which results into shortage of teaching and learning materials and aids including text books, reference books, science and mathematics kits, first aids and stationeries. The problem contributes and hinders academic performance among pupils and even teachers face some difficulties in performing their duties properly, due to lack of teaching aids. Results in Table 3 show that in some schools the ratio of books per students was observed to be a great problem, so the district council or the central government has to immediately address the problem in order to improve pupil's examination performance, because there is a positive relationship between book ratio and pupils' examination performance.

Overcrowding in classes and long distance to schools were reported to be among the factors adversely affecting academic performance among the pupils in Maswa. Most of the respondents noted that large number of pupils in the class being a problem in most of the public primary schools in Maswa district. This problem is mainly caused by the shortage of schools in the district, thus some of the pupils walk long distance to and from the schools, in this case, pupils learning being affected due to tiresome and therefore, results into poor performance in examinations.

Truancy and absenteeism affect academic performance to some pupils. Some pupils irregularly attend to school due to several factors including parent's failure to pay school fees, home activities and personal pupils' behaviours and gang groupings. The truants therefore, miss a number of class lessons hence, during assessment they do poorly.

Teachers' low morale to teach due to lack of motivation has been discussed as the most challenging issue about pupils' examination performance in most of the schools in the Maswa district. This happens when the government pays low wages, lack allowances for extra work hours, lack of teaching allowances, absence of transport allowance, lack of seminars and workshops, lack of teacher's houses and absence of social services like water, electricity and other services specifically in rural areas. These factors frustrate teachers and hence, discouraged to work hard.

Parents' perception on girl education achievement, it was concluded in the discussion that some of the parents and care givers despise girls to perform better in education. The parents and care givers sometimes frustrate schooling girls by convincing them not to do better in their examination so that they can be married and bring bride price at home. This is also, one of the reasons why girls perform poorly in their examinations than boys.

Absence or lack of internal and external school inspection due to lack of funds to the education inspectorate department was among the factors for poor performance, some schools especially those located in the peripheral are rarely visited by school inspectors. This means that, the schools receive less or no inspection in a year thus, the situation



results into unchanging teaching behaviour and practices hence, affecting pupil's academic performance.

Presence of more than one text books for the same subject in the same class was also seen to be a great challenge to pupils to decide what book to use for studies. The study observed that within the teaching and learning environment, there was more than one text book with varying content. This situation disturbs learners in terms of knowledge and skills. Take for instance in the oxford standard four textbook, the content shows that there are thirteen (13) symbols in the national symbol while the Jadida textbook presents eleven (11) symbols, this subjects pupils and teachers into dilemma on which text book correct. Some of the teachers said that, 'even the content of these books differ' for instance the standard seven (VII) geography text book by Ben and Company LTD in relation to Oxford Books, Oxford textbooks were said to be a bit better than those of Ben and Company LTD. However, the question is if both books claim to address the same curriculum, why differ in content? So, this dilemma tends influence teaching and learning status hence, affects pupils' academic performance.

Communication problem and presence of many subjects especially in lower classes like standard one and standard two were said to affect heavily the learning behaviour of the pupils. This is due to the fact that the age, pupils' ability, language (mother tongue) and the new environment, psychologically affects pupils in the learning process, so if the study content and quantity is not proportional to pupils as arranged and planned well; it may greatly affects the learning process of the child. There are many disciplines of study within these classes, example Kiswahili, Mathematics, Science, Vocational Skills, English and Writing skills in class one and too, this is too much for children to comprehend. For example, ability of class one and two pupils in English and Kiswahili, in Kiswahili when they pronounce "a" in English it is different, the same as "e" and "i" respectively. Based on their level it becomes difficult for them to comprehend and differentiate these vowels, keeping in mind that majority pupils in rural areas join class one knowing vernacular language with little bit Swahili words. Thus, communication problem and too many subject directly affects the learning process of the children which can result into poor performance.

Absence of sports and games in school was also said to affect pupil's studies. Psychologist have investigated and recommended that, there is no any single human growth that goes alone but all human growth goes together with other human growth including Intelligence (IQ), body growth, spiritual as well as moral growth. With absence of sports and games pupils cannot be academically good. So schools should have sports and games facilities and allow pupils to play and develop their talents in sports and games.

Shortage of desks, teachers, books, toilets and classrooms result in unconducive learning environment as some sit on floor, some subjects partially taught or completely not taught



and congestion in the classes and queuing for wash rooms demotivate pupils learning hence learn difficultly acquiring bad handwriting as a result perform poorly in examinations.

Frequent change of school curriculum was also discussed as a challenge in education system, according to the current constitutional, minister of education has the power to change the policy and even the curriculum, due to this situation; ministers use this opportunity to change the school curriculum as they were appointed by the president. This is revealed in the past ten (10) consecutive years (2003-2013) in which many things were changed for instance 'No sports and games' then 'yes', no agriculture, bookkeeping and accounts subjects. Thus, this situation disturbed the system ionic equilibrium of education hence, poor examination performance among pupils.

On the other hand the few schools and pupils who perform better were due to some schools having enough teaching and learning aids which stimulate learning process. Some schools had better teaching and learning environment whereby enough classrooms and teachers' houses and other learning infrastructure were available. Presence of competent teachers, teachers' commitment, control of teachers and students' absenteeism, provision of many exercises, remedial teaching and weekly tests tend to positively influence pupils performance in examinations.

#### **4.0 Conclusion and Recommendations**

Among many school based factors that influence pupil's examination performance in Maswa district teacher's commitment was the only factor that significantly positively influenced pupils' examination performance. Factors like distance to and from school (in km), time spent for walking travel to and from the school, Pupils' learning environment, pupils' pit latrine ratio and teaching and learning methods negatively influenced pupil's academic performance but not significantly while pupils' book ratio, pupils' teacher ratio and pupils' desk ratio positively but not significantly influenced pupils academic performance. Positively influencing factors means that as factors increased, the pupils' examination performance also increased and the vice versa was the case that is to say as factors decreased, the pupils' examination performance also decreased while on the other hand negatively influencing factors means that as factors increased, the pupils' examination performance also decreased and the vice versa is true.

School boards should work on the possible means to implement the educational policy issues as stated in the National Education Policy of 1995 and work on all the factors that adversely influence pupil's academic performance. Parents should be educated to provide equal opportunity among their children by regarding each child with equal opportunity in all aspects of life, including giving female children chance to study like male children. Employers should employ quality teachers with professional skills motivate them by giving



opportunities for career development, remunerating in the sense of total compensation payments, bonuses, and the like.

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## References

- Considine, M. and Zappala, N. (2002). *Factors Affecting Pupils' Academic Performance in Kenya certificate of primary education in public day primary schools in Kenya: a case study of Magena division of Kenyena district*. [<http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/30114>] site visited on 26/8/2013.
- Coombs, P.H. (1970). *What is Educational Planning? Fundamentals of Educational Planning 1*, Paris: UNESCO International Institute for Educational Planning (IIEP).
- Darling - Hammond, L. (2000). *Teacher Quality and Student Achievement: A review of State Policy Evidence*. *Educational Policy Analysis Archives*, 8, (1). [<http://epaa.asu.edu/epaa/v8n1>] site visited on 01/09/2013.
- Jim, R. (2012). *Motivation Theories*: [[http://www.tutor2u.net/business/gcse/people\\_motivation\\_theories.htm/](http://www.tutor2u.net/business/gcse/people_motivation_theories.htm/)] site visited on 01/4/2013.
- Kasia, N. (2010). *Education Performance*: [<http://blog.educaedu.com/en/2010/12/15/oecd%E2%80%99s-top-10-countries-by-education-performance/>] site visited on 14/03/2013.
- United Republic of Tanzania (URT). (2008). Ministry of Education and Vocational Training (MoEVT). Examination Results: [<http://www.moe.go.tz/>] site visited on 8/4/2013.
- Moloi, M. and Strauss, J. (2005). *The Conditions of Schooling: the Quality of Education*. South Africa working Report, Harare and Pretoria, SACMEQ and the Ministry of Education, pp115-118.
- Nzabihimana, D. (2010). *The Nature of Schools and Academic Performance of Pupils in Primary Schools in Gasabo district Kigali City*: [<http://www.memoireonline.com/sommaires/sociologie.html>] site visited on 25/8/2013.
- Olajejo, M.A and Olusunde, G, R. (2011). *Instructional Materials and Students' Academic Achievement in Physics: Some Policy Implications*. *European Journal of Humanities and Social Sciences*, 2(1).
- Solar, C, (2013). *Definition: Academic performance*: [http://answers.ask.com/Education/Schools/what\\_is\\_academic\\_performance/](http://answers.ask.com/Education/Schools/what_is_academic_performance/)] site visited on 4/4/2013.



Sunday, M. (2012). When there is a Discrepancy in the Implementation of vision 2025. The Guardian newspaper, 31st October, Issue no- 5579, page 9.

Umameh, M. (2013). Survey of students' Poor performance in Mathematics in SSCE: [[http://www.academia.edu/2646236/Survey\\_of\\_students\\_poor\\_performance\\_in\\_Mathematics\\_in\\_SSCE](http://www.academia.edu/2646236/Survey_of_students_poor_performance_in_Mathematics_in_SSCE)] site visited on 11/9/2013.

URT (1995). Education and Training Policy, MoEVT, Dar es Salaam

Yamane, T. (1967). *Statistics, An Introductory Analysis*, 2nd Edition, Harper and Row, New York