

## **An Analysis of Gender Related Disparities of School Achievement Rates at ‘O’ Level in Manicaland**

Elisha K. Nyatanga and Daniel Ndudzo  
*Zimbabwe Open University, Zimbabwe*

---

**Abstract:** *The study investigated gender inequalities in educational provision in the province of Manicaland. Focus was on the differences in performance between boys and girls in mathematics as well as the disparities between male and female head teachers in both primary and secondary schools. The period that was examined by the researchers was at least ten years after obtaining political independence. All the primary schools (773) and secondary schools (248) were studied. Secondary data on the above mentioned variables were collected from the Ministry of Education and Culture’s head office, Regional offices in Mutare and the Examination Branch in Harare. Some data were collected from the Central Statistical offices. Measures of educational disparities included location quotients and percentages. The study revealed that there were significant differences in the performance between boys and girls, with boys outperforming girls. The study also revealed that there were significantly lower numbers of female heads of schools in most districts. The study recommended that the government should collaborate with parents and other stakeholders to invest more in educating the girl child. The study also recommended that the government should institute deliberate policies to increase the numbers of female heads of schools.*

---

### **I. Introduction**

The pre-independence education system in Zimbabwe (Rhodesia at that time) was organised on racial lines, with the system skewed against blacks. For the blacks, resources were limited and families could not afford to effectively send all their children to schools regardless of gender. The male children were therefore prioritised more than the girls in funding for education hence there were inequalities in access to resources between boys and girls at schools. The pre-independence government’s participation in African education was very minimal hence there were no efforts to balance the interests of all sexes and races. The implications were even more severe for black female children as they were only considered for academic progression by their families after the interests of boys were fully secured.

### **II. Statement Of The Problem**

The pre-independence era in Zimbabwe was characterised by policies that discriminated people on the basis of race. This resulted in further discrimination against women and girls in native black communities as resources were being channelled more towards the welfare of boys. The extent of the discrimination on the pass rate of girls has not been sufficiently established through empirical research. There is also limited knowledge on the disparities in employment of female head teachers in Manicaland.

### **III. Research Questions**

- Were there gender related disparities in ‘O’ level mathematics?
- Were there any gender based disparities in school leadership?

### **IV. Significance Of The Study**

Zimbabwe is one of the developing countries and a research in inequalities in education might provide useful information that could contribute to national development through addressing the inequalities. The study is also in sync with the government’s drive of women empowerment as a measure of improving the socio-economic fundamentals in Zimbabwe. The empowerment drive was for a long time undermined by the lack of information. For example, district development committees did not have the necessary instruments nor the literature to justify the methods used in distributing educational resources.

In Manicaland province the development committees and planners have no scientific and reliable instruments to inform policy on the degree of developments required in gender equality of each district and the magnitude of disparities between districts. It is hoped that this research report shall be instrumental in redressing some of the educational inequalities resulting from lack of adequate information by the policy makers and planners. The data collected and analysed would be available to educational institutions and could be used by

students and other researchers as a source of information for any further research on the same related topics. Any longitudinal study of educational disparities in Manicaland could use this study as a starting point for further related investigations.

Carron and Chau (1981) stress the view that politicians should know and appreciate the importance of equitable distribution of educational resources because disparities can cause national disunity which can have unbearable consequences. This is because education, as proposed by Blaug (1980), Jenks (1972) and Mullins and Ota (1989) is associated with economic growth. Many communities see education as the determinant for employment and social mobility. The distribution of educational resources should therefore be seen to be equitable.

## **V. Review Of Related Literature**

The review of related literature enabled the researchers to develop a clear conceptual framework of the area under investigation. The study of related literature helped the researchers to focus their research problem on specific areas of educational disparities. Equality of educational opportunity is defined by Collins et al (1973:74) as the political ideal that all children should have equal chances to develop their abilities and aptitudes to the fullest extent regardless of family background and social class. This definition is supported by Coleman (1967:234) who explained that in the United States of America, from the beginning the concept of educational opportunity had a special meaning which focused on equality. The implication is that the education system should provide equal opportunities for both boys and girls.

Equity considerations in educational discourse are based on both the theoretical and practical analysis of the educational spectrum. Cornoy et al (1982:40) citing a world bank report (1980b, p78) argued that educational opportunities should be equalised in the interest of both increased productivity and social equity. This view is supported by Blaug (1980:146) who states that education when looked at as a type of social investment makes, people more productive. If this assumption is accepted, it would mean that regions with more educated people could be more productive and experience in rapid economic growth. That would result in a higher standard of living.

The relationship between education and economic growth is emphasised by Bowles (1980:206) who stresses that educators have the conviction that educational policy can be a major instrument in promoting economic growth and achieving a more just distribution of economic rewards. On the same vein, Mullins and Ota (1989:10) state that education has been assigned a substantial political, economic and social role for socio-economic transformation. The above authors concur with Zvobgo (1985), Gwarinda (1985) Chung and Ngara (1985).

Dorsey (1989:16) suggests that the causes of girls underrepresentation and underachievement in secondary schools may be cumulative and due to the transmission of cultural values and beliefs about the sexes through early socialisation in the family and secondary school. Female heads may inspire girls to put more effort in their work and challenge boys at academic work.

An analysis of the historical background to the educational system in Zimbabwe could form a prelude to the investigation of the inefficiencies and inequalities of education in Manicaland. The colonial education system in Rhodesia (now Zimbabwe) was segregatory. The Education Act of 1969 consolidated the then existing racial structures. Enormous amounts of money were spent on education but most of that money went to the minority ethnic groups-whites, Asiatic descendents and coloureds. Riddell (1980:23) explained that disparity in the allocation of resources by stating that in the financial year 1977-78, the total expenditure on budget account of central government on education was \$70.7 million. Of that amount, \$31.7 million went to European, Asian and Coloured education and \$39.7 million to African education. This gives an average of \$491 for each European, Asian and Coloured pupil and only \$45 for each black pupil, thus over ten times more was spend on average on each white pupil. The disparities were also significant based on gender in the African communities. An illuminating picture is given by Mhlanga (1982: 282-290) who contrasts the transition rate of the African system of education with that of the whites. The cohort survival rates for 1975 are given as follows:

- a) African system: Those who entered Grade 1, 55% got to grade 7, 11% to Form 1 and 6% to Form IV.
- b) White system: Of those who entered Grade 1, 88% proceeded to Form 1 and 80% to Form IV.

The literature however did not adequately analyse the disparities in gender equity for school children and representation at leadership level by analysing the frequency of female headteachers as compared to male heads.

## **VI. Research Methodology**

The research design used falls under the category of a census. Cohen and Manion (1989:71) suggest that a census is a developmental research which involves time series, longitudinal and cross sectional studies. Most of the study focused on cross sectional survey with a view of drawing comparisons based on some educational characteristics. According to Casley and Lury (1987:65) the research design used would fall under case studies because a mixture of methods was used. These included personal observation, the use of

informants for current and historical data, straight forward interviewing; and the tracing and study of relevant documents and records from local and central government. In this research documentary analysis constituted the main instrument for collecting data. The research design enabled the quantification of educational disparities. That was essential if comparisons between districts were to be established.

Secondary data were collected from the Ministry of Education and Culture's regional offices. The District Staffing Officers provided the researchers with very relevant statistical data. Some data were collected from the Annual Reports of the Secretary for Education and Culture. Some information from school heads was also used to cross check data from the official documents at the Ministry's Regional Offices. Data on enrolments and district population were obtained from publications of the government's central statistical offices. Some school heads and education officers were interviewed. Casley and Lury (1987) state that the approach can be very flexible. A consequence of that is the requirement that the investigators should have the ability, experience and impunity to observe, interview, record and review the material collected.

The research covered all the seven districts that make up the province of Manicaland. The primary schools enrolment studied was 373896 pupils and the secondary schools had 97583 pupils according to the 1992 statistics at the Ministry of Education and Culture's Regional Office. The total number of secondary schools studied was 248. The population of primary schools was 773.

## VII. Presentation And Interpretation Of Data

### 7.1 Gender Based Inequalities In Academic Achievement

The research question in this area was to find out whether there were any differences in performance in Mathematics between female and male students at O' level examinations. The null hypothesis stated that the performance of boys in Mathematics at O' level is just as good as that for girls at the same level. The researchers used the Cambridge School Certificate examination results for 1991. The table below shows the results.

#### Gender Based Inequality

District	Critical Chi-Square Values		Computed Chi-Square Value	Computed Phi-Square	Rank
	AT 5%	AT 1%			
BUHERA	11.07	15.09	52.01	0.048	4
CHIPINGE	11.07	15.09	96.69	0.091	7
CHIMANIMANI	11.07	15.09	34.2	0.034	2
MAKONI	11.07	15.09	35.21	0.020	1
MUTARE	11.07	15.09	115.54	0.037	3
MUTASA	11.07	15.09	59.11	0.074	6
NYANGA	11.07	15.09	31.34	0.055	5

In order to quantify the degree of inequality in performance between boys and girls in Mathematics, the researchers tested the null hypothesis that there was no difference in performance in Mathematics between boys and girls.

With all the districts the null hypothesis was rejected at 1% level of significance. The researchers asserted with 99% confidence that there was a significant difference between the performance of boys and girls. The phi-square used enabled the ranking of the districts. Makoni had the least disparity while Chipinge was the worst. It was easy to understand why there should be differences in performance between districts. Inequalities in the distribution of inputs discussed already and different process activities would result in differences in performance. Some cultural factors as discussed by Dorsey (1989) and Stromquist (1989) could influence the performance of girls positively or negatively.

### 7.2 Distribution Of Female Heads

The research was not going to be complete without investigating the leadership roles of females in school administration. Both Dorsey (1989) and Stromquist (1989) infer that female leaders influence achievement among girls in schools. The tables that follow show each district's percentage of secondary and primary heads compared with their share (percentage) of female heads.

#### Female heads in secondary schools as percentage of all heads in each district

District	District % Of Secondary Heads In The Province	District % Of Female Heads In The District	Rank
BUHERA	18.55	36.84	1
CHIPINGE	12.90	5.26	6
CHIMANIMANI	8.06	0	7
MAKONI	22.18	26.32	2
MUTARE	19.35	15.79	4
MUTASA	9.68	10.53	3
NYANGA	9.27	5.26	5

**Female heads in primary schools as percentage of all heads in each district**

District	% Of Female Primary Heads	% Of Female Secondary Heads	Rank
BUHERA	16.56	12.28	5
CHIPINGE	13.45	5.26	7
CHIMANIMANI	8.93	5.26	4
MAKONI	20.57	21.05	3
MUTARE	22.25	40.35	1
MUTASA	8.15	10.53	2
NYANGA	10.09	5.26	6

The table shows that Buhera district has done remarkable work in promoting female heads. Makoni and Mutasa follow behind Buhera in that order. Not even a single school in Chimanimani had a female secondary head. Chipinge, Mutare and Nyanga had some female heads but they were very few. In the primary schools, Mutare district had done a lot to promote female heads. Chipinge, Nyanga and Buhera were lagging behind. The spearman's rank order correlation in academic achievement and female headship in secondary schools was 0.2, which is low.

Nearly all the data that was presented showed that inequalities existed in districts and between districts. In the primary schools, only fifty seven out of the seven hundred and seventy three heads were females. Buhera with one hundred and twenty eight heads had only seven females. Chipinge with one hundred and four heads had three female heads

The distribution of secondary female heads showed some inequalities. Buhera district took a leading role in the promotion of female heads, 36.84% of all the heads were females. Makoni district with 23.32% followed Buhera, Mutasa with 10.53% did fairly well. Some of the districts that had conservative attitudes about promoting female heads were Chipinge, Mutare and Nyanga. Chimanimani did not have a single female head in the secondary schools.

The reasons given for the disparities in the promotion of female heads were many. It was stated by some staffing officers that the majority of female teachers were not keen to be promoted to leadership positions, because of cultural reasons. It was suggested that females found it difficult to lead males. These opinions needed to be tested scientifically in another research. It was probable that the education management which was dominated by men might have dragged its feet in the promotion of female heads. A government policy of positive discrimination in the appointment of school heads was required to redress the situation.

**VIII. Conclusions**

The study concluded that there were differences in the performance of boys and girls, with boys significantly outperforming girls. The differences could be attributed to the differences in access to study materials and resources, with most families preferring to secure the interests of boys ahead of girls. The distribution of female heads was uneven and the number of such heads very low.

**IX. Recommendations**

1. The government should invest more in funding and subsidising education for girls. Partnerships should also be sought with churches, traditional leaders and parents in increasing commitment towards funding of girl child education.
2. The Ministry of Primary and Secondary Education and the different responsible authorities should use positive discrimination in the allocation of education resources. Districts lagging behind in the number of schools, trained teachers or female heads should be given more resources so that they catch up with the more highly performing districts.
3. Further research is needed to investigate the causes of unequal performance between boys and girls at regional or national level.
4. Further studies should be carried out using the 2012 census results to determine the extent to which the disparities that existed during the first decade of attaining political independence had persisted or reduced.

**References**

[1]. Albert, M. and Hahnel, R. (1991) *The Political Economy of Participatory Economics*. Princeton: Princeton University  
[2]. Alexander, Simmons, J. (1975) *The Determinants of School Achievement in Developing Countries: The Education Production Function*. Washington DC: IBRD  
[3]. Bowles, S (1980) "Education, Class Conflict and Uneven Development" In Simmons (ed) *The Education Dilemma. Policy Issues for Developing Countries in the 1980s*. Oxford. Pergamon  
[4]. Bowman, M.; Millot, B. and Schiefebein, E. (1986) *The Political Economy of Higher Education, Studies in Chile, France and Malaysia*. EDT Discussion Paper N030 Washington, DC  
[5]. Carnoy et al (1982) "The Political Economy of Financial Education in Developing Countries". In *Financing Educational Development. Proceedings of an International Seminar held in Mount Sainte Marie, Canada. 19 – 21 May 1982*, Ottawa: International Development Research Centre.

- [6]. Carron, G. and Chau, T. N (eds) (1980) Regional Disparities in Educational Development. Diagnosis and Policies for Reduction. Paris: UNESCO
- [7]. Casley, D. J and Lury, D. A. (1987) Data Collection in Developing Countries: Oxford University Press
- [8]. Chikomba, C. E. M et al (eds) (1988) Education in the new Zimbabwe. Proceedings of a Conference held at Michigan State University in collaboration with the Faculty of Education, University of Zimbabwe, 1986
- [9]. Chikomba, C. E. M Regulations and Guide for the presentation of Theses. University of Zimbabwe
- [10]. Cohen, L. and Manion, L. (1980) Research Methods in Education. London: Longman
- [11]. Coleman, J. S. et al (1966) Equality of Educational Opportunity. Washington D.C.: Government Printing
- [12]. Coleman, J. S. (1967) The Concept of Equality of Educational Opportunity. A Paper delivered at the conference on the "Equality of Educational Opportunity. Harvard Graduate School of Education
- [13]. Collins, K. T. et al (1973) Key Words in Education. London: Longman
- [14]. Coombs, P. H. and Hallak, J. (1987) Cost Analysis in Education. A tool for policy and planning. Baltimore: World Bank
- [15]. Dorsey, B. J (1989) Educational Development and Reform in Zimbabwe. In Comparative Education Review Vol. 33 No. 1
- [16]. Duignan, P. (1986) Research on Effective Schooling: Some Implications for School Improvement. The Journal of Educational Administration. Volume XXIV No. 1 Winter 1986
- [17]. Fuller, B. (1987) What School Factors Raise Achievement in Third World?" Review of Educational Research. (57) 3, 1987
- [18]. Gay, L. (1980) Evaluation and Measurement Columbus: Charles Merrill
- [19]. Good, T. L. (1979) Teacher Effectiveness in the Elementary Schools. Journal of Teacher Education. March – April 1979
- [20]. Greenfield, W. (1987) Instructional Leadership Concepts, Issues and Controversies. Boston: Allyn and Bacon
- [21]. Guthrie, J. W. (1977 and ) Educational Policy Research and the Pursuit of Equality, Efficiency Liberty. A draft paper delivered at a university council on Educational Administration Career Development Seminar at the University of Rochester May 15 – 18 1977
- [22]. Gwarinda, T. C (1985) Socialism and Education, An Introduction. Harare: College Press
- [23]. Hahner, R. and Albert, M. (1990) Quiet Revolution in Welfare Economics. Princeton: Princeton University Press
- [24]. Hoy, W. K and Miskel, C. G. (1978) Educational Administration: Theory and Practice. New York: Basic Books
- [25]. Letwin, W. (ed) (1983) Against Equality, Readings on Economic and Social Policy. London: Macmillan
- [26]. Levin, H. (1987) Education as a Public and Private Good. Journal of Policy Analysis (6) 1987
- [27]. Levin, H. (1987) New Schools for the Disadvantaged. Stanford: Ceras
- [28]. Lindblom, C. (1976) Politics and Markets: The World's Political Economic Systems. New York: Basic Books
- [29]. Makasi, A. S. (1989) The Causes of Form II and Form IV Dropouts in Masvingo Region. (unpublished dissertation for Master of Education, (Educational Administration). University of Zimbabwe
- [30]. Mandaza, I. (1987) Zimbabwe, The Political Economy of Transition 1980 – 1986, Harare: Jongwe Press
- [31]. Maposa, A. D. (1991) An Analysis of the Extent to which Selected Reforms have contributed to the Reduction of Inequalities in Educational Opportunities in Primary Schools: The case of Matebeleland North. Unpublished Research Project for a Diploma in Education. University of Zimbabwe
- [32]. MacMahon, W. W. and Geske, T. G. (1982) Financing Education Overcoming Inefficiency and Inequity, Urbana: University of Illinois
- [33]. Mhlanga, J. (1982) Some Features of the Education system and Transformation since Independence in Zimbabwe. In a Report – Intensive Training Course on Microplanning and School Mapping. Arusha: International Institute for Educational Planning
- [34]. Miller, D. (1989) Market, State and Community. Theoretical Foundations of Market Socialism. Oxford: Clarendon Press
- [35]. Monk, D. H. (1990) Educational Finance An Economic Approach. New York: McGraw Hill
- [36]. Mulder, J. C. (1982) Statistical Techniques in Education. Pretoria: Haum
- [37]. Mullins, B. and Ota, C. (1989) Regional Disparities in Educational Development in Zimbabwe. Draft Paper Presented at Comparative and International Education Society 33<sup>rd</sup> Annual Meeting. Harvard Graduate School of Education April 1989
- [38]. Psacharopolous, G. and Woodhall, M. (1985) Education for Development. An Analysis of Investment Choices. Washington: Oxford University Press
- [39]. Rawles, J. (1977) A Theory of Justice. Cambridge: Harvard University Press
- [40]. Riddell, R. (1980) Education for Employment. Gweru: Mambo Press
- [41]. Samah, A. A (1991) Effective Indicators of Quality Education. Manila: International Conference
- [42]. Sapra, C. L. (1990) Equity and Diversity: Challenges for Educational Administrators in India. Journal of Educational Administration. Volume 28 No. 2 1990 pp 48 – 66
- [43]. Simmons, J. and Alexander, L. (1980) Factors which Promote School Achievement in Developing Countries: A Review of the Research. The Education Dilemma: Policy Issues for Developing Countries in the 1980s. Oxford: Pergamon
- [44]. Stromquist, N. (1980) Determinants of Educational Participation and Achievement of Women in the Third World. A Review of the Evidence and a Theoretical Critique. In Review of Educational Research. Summer 1989 Vol. 59 No. 2 pp 143 – 183.
- [45]. World Bank (1990) Zimbabwe, A Review of Primary and Secondary Education. From Successful Expansion to Equity of Learning Achievements. Vol I and II
- [46]. Zimbabwe Government (1986) Annual Report of the Secretary for Higher Education for the Year Ended 31 December 1986, Harare
- [47]. Zimbabwe Government (1989) Annual Report of the Secretary for Higher Education for the Year Ended 31 December 1989, Harare
- [48]. Zimbabwe Government (1987) Education Act, 1987, Harare
- [49]. Zimbabwe Government (1989) Manicaland Province Comparative Tables: District Populations Indicators and Information for Development Planning, Harare, September, 1989
- [50]. Zimbabwe Government (1989) Provincial Population Data Sheets, Harare
- [51]. Zimbabwe Government (1989) Statistical Year Book 1989, Harare
- [52]. Zimbabwe Government (1991) Zimbabwe, A Framework for Economic Reform, Harare
- [53]. Zimbabwe Government (1989) Zimbabwe in Maps a Census Atlas. Harare
- [54]. Zimbabwe Government (1985) Zimbabwe 1982. Population Census. Main Demographic Features of the Population of Zimbabwe: An Advance Report Based on a Ten Percent Sample. Harare
- [55]. Zimbabwe Government (1989) Report of the Commission of Inquiry into the Establishment of a Second University or Campus. Chaired by Williams, P.R.C.
- [56]. Zinyama, L. M. (1989) Spatial Inequalities in Zimbabwe with Reference to the Communal Farming Areas. In Swindell Inequality and Development: Case Studies from the Third World. London: MacMillan
- [57]. Zvobgo, R. J. (1985) Transforming Education – The Zimbabwean Experience, Harare: College Press