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AN EDUCATION NEEDS ASSESSMENT OF BLANTYRE CITY, MALAWI

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ABBREVIATIONS

ACEM	Association of Christian Educators in Malawi
AIDS	Acquired Immune Deficiency Syndrome
BCA	Blantyre City Assembly
BTTC	Blantyre Teacher Training College
CBCC	Community-Based Child Care
CCAP	Church of Central African Presbyterian
CDSS	Community Day Secondary School
CERT	Center for Educational Research and Training
CSS	Conventional Secondary Schools
DEM	District Education Manager
DEMIS	District Education Management Information Systems
DEO	District Education Office
DEP	District Education Plan
DFID	United Kingdom's Department for International Development
DSWO	District Social Welfare Office
DTED	Department of Teacher Education and Development
ECD	Early Childhood Development
ECE	Early Childhood Education
EFA	Education For All
EI	Earth Institute
EMIS	Education Management Information Systems
EPSSim	Education Policy and Strategy Simulation Model
GIR	Gross Intake Rate
GoM	Government of Malawi
FPE	Free Primary Education
HIV	Human Immunodeficiency Virus
IHS2	Integrated Household Survey 2
JCE	Junior Certificate for Education
MCI	Millennium Cities Initiative
MDGs	Millennium Development Goals
MGDS	Malawi Growth and Development Strategy
MIE	Malawi Institute of Education
MICS	Multiple Indicator Cluster Survey
MoEST	Ministry of Education, Science and Technology
MoGCWCS	Ministry of Gender, Child Welfare and Community Services
MoWCD	Ministry of Women and Child Development
MoYDS	Ministry of Youth Development and Sports
MSCE	Malawi School Certificate of Education
MWK	Malawi Kwacha
NALP	National Adult Literacy Programme
NESP	National Education Sector Plan
NSO	National Statistics Office
OVC	Orphans and other Vulnerable Children
PEA	Primary Education Advisor

PER	Public Expenditure Review
PIF	Policy and Investment Framework
PRISAM	Private Schools Association of Malawi
PRSP	Poverty Reduction Strategy Paper
PSLCE	Primary School Leaving Certification Examination
SADC	Southern Africa Development Community
SWED	South West Education Division
TEVET	Technical Entrepreneurial and Vocational Education and Training
THA	Traditional Housing Areas
T'LIPO	Teachers Living Positively
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNIMA	University of Malawi
UPE	Universal Primary Education

EXECUTIVE SUMMARY

As a Millennium City, Blantyre, Malawi, is the site of new needs assessments, interventions and planned investments aimed at helping the city achieve the Millennium Development Goals (MDGs).

The Government has taken steps to address development issues, mainly through national policies outlined in documents such as Vision 2020, the Malawi Growth and Development Strategy [MGDS], Malawi's Poverty Reduction Strategy Paper [PRSP], the National Education Sector Plan [NESP] and the Policy Investment Framework [PIF] (GoM, 2000a). In all these documents education is identified as a critical component of poverty alleviation and socioeconomic development.

The introduction of Free Primary Education (FPE) in 1994 has resulted in large increases in primary school enrollments over the past 16 years. However, the rapid increase in the number of students attending primary schools has also produced infrastructure problems and a decline in the quality of education. Specific major challenges facing primary schools in Blantyre City include high pupil-to-classroom ratios and a lack of qualified teachers. Inadequate sanitation facilities are also a serious problem, given their negative impact on girls' enrollments. According to the Blantyre City Assembly's 2008-2011 District Education Plan (DEP), the pupil-to-classroom ratio was as high as 142:1, while the pupil-to-latrine ratio was 111:1 (BCA, 2007). In the face of overcrowded classrooms, those with economic means often attend private schools, leaving the less affluent students to cope with inadequate resources in the public schools and at a disadvantage in their efforts to qualify for secondary school.

Although the Millennium Development Goals do not explicitly mention early childhood education (ECE), it is important to underscore that this level contributes towards achieving universal primary education by preparing children for primary school. Unfortunately, the Government of Malawi and the Blantyre City Assembly are still not fully involved in the provision of pre-primary schooling.

Secondary schooling is also critical for achieving universal primary education because students are more likely to attend primary school if they know they will be able to proceed to secondary school. However, many students still cannot attend secondary school because of classroom shortages and high school fees (BCA, 2008).

This needs assessment finds that with an annual per capita investment of \$22 between 2010 and 2015, Blantyre City can achieve the Millennium Development Goals in education.

This report is structured as follows. The first and second sections provide background information on the study and a status report on schooling in Blantyre in recent years. The third section addresses the financing of education in Blantyre and presents the results of the costing model, while the fourth section summarizes the findings and presents some recommendations.

Figure 1. Map of Malawi Showing Blantyre



Source: UN Cartographic Section

I. INTRODUCTION

1.1. Background

Blantyre City is located in the southern region of Malawi, a landlocked country in southeastern Africa. With a size of 220 square kilometers, Blantyre City is situated in the Blantyre District of Malawi¹ and is governed by the Blantyre City Assembly. Although Lilongwe is the capital of Malawi, Blantyre City is the center of trade and commerce and serves as the economic capital of the country.

Blantyre's boundaries were established in 1949, following the creation of the Town and Country Planning Ordinance. In 1956, Blantyre Town merged with neighboring Limbe Town, which was experiencing economic success and rapid growth (BCA, 2000).

Blantyre City is doing relatively well with regard to basic enrollment and gender parity, areas of educational provision that are problematic in Malawi's rural areas. However, there are structural strains within the educational system that must be actively addressed. The most pressing concern is that of quality.² The high pupil-to-teacher ratios which have accompanied large increases in enrollments, as well as the scarcity of qualified teachers, have had detrimental effects on the quality of education. For instance, teachers have little time to correct assignments or to identify struggling students. Lack of textbooks, teaching guides and other materials are also major concerns.

1.2. Scope of Research

This needs assessment focuses on education in Blantyre City and the city's efforts to achieve the education-related Millennium Development Goals (MDGs). These include ensuring that all children have access to primary schooling (MDG 2) and eliminating gender disparities at all levels of education by 2015 (MDG 3, Target 4). While the focus of MDG 2 is primary education, this assessment will also examine education at the pre-primary, secondary and tertiary levels.

1.3. Objectives

This needs assessment has two objectives: first, to present the challenges facing the City's education system at each level; second, to identify the human and financial resources necessary for the city to attain MDG 2 and Target 4 of MDG 3.

1.4. Limitations

The main challenge faced during the field research was obtaining data on pre-primary schools, technical and vocational schools and higher education institutions. This is because the Ministry

¹ Blantyre is both a district as well as a city. Blantyre District is made up of Blantyre Urban and Blantyre Rural. The term "Blantyre City" is often used interchangeably with "Blantyre Urban". For the purposes of this report, Blantyre City refers to the urban section of Blantyre District.

² The discussion of school quality in this assessment will focus on teacher qualifications and pupil-to-teacher ratio.

of Education, Science and Technology (MoEST) is not the primary provider of education at these levels. In areas where the MoEST does not have a leading role, data collection is not regulated by the government and therefore tends to be scattered, incomplete and decentralized. For instance, organizations like the United Nations Children’s Fund (UNICEF), the Association of Pre-school Playgroups Malawi and a number of private centers are responsible for funding pre-primary schools and they collect data, but their data are not included in the ministry’s Education Management Information Systems (EMIS) reports.³ The same is true of data collected and maintained by the University of Malawi (UNIMA) as well as data on Technical Entrepreneurial and Vocational Education and Training (TEVET) schools.

Moreover, the South West Education Division (SWED)—which maintains records on teacher and staff salaries, power and water bills, school supplies and construction projects— only has information available in hard copy. This information is also not consolidated, making such items as teacher salaries and school construction costs difficult to verify.

Finally, another challenge is that information regarding private schools was not available, despite numerous and varied attempts to contact the Private Schools Association of Malawi (PRISAM). While such information is not necessary to calculate public costs needed to meet the education-related MDGs, it would have been useful to provide a full picture of all educational institutions in Blantyre City.

1.5. Methodology

The information used in this report was collected over a seven-week field research period between April and May 2008. All quantitative data used in the Education Policy and Strategy Simulation (EPSSim)⁴ costing model are from the MoEST. Interviews were also conducted with government officials, nonprofit administrators and teachers.

In addition to the quantitative data collected, visits were conducted at academic research institutions in Malawi such as the Center for Educational Research and Training (CERT) at Chancellor College in Zomba. CERT oversees a number of research projects focused on issues such as teacher absenteeism and the financing of Free Primary Education (FPE). Their various studies and papers provided a basic framework for understanding some of the issues otherwise observed through quantitative data collection. Over the course of the research in Malawi, a number of informational interviews were held with administrators and stakeholders involved in the provision of education. The impact of FPE, both in terms of class size, and more importantly, regarding teaching resources and capacity, were discussed repeatedly.

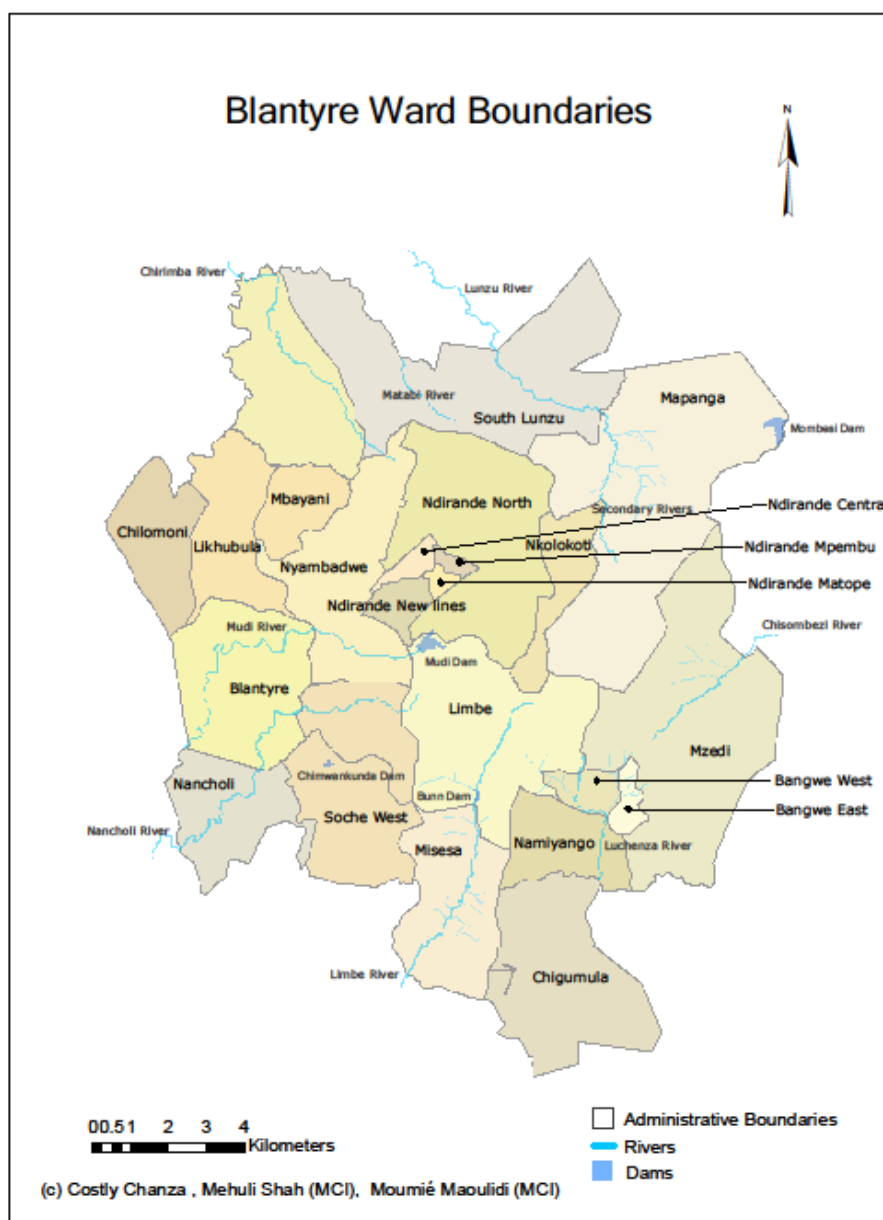
³ The MoEST has very detailed information collected within the national Education Management Information Systems (EMIS) report as well as an electronic database system called EdAssist. This includes information on private and religious schools as well as on government-operated schools.

⁴ The EPSSim model was developed by UNESCO and is used in education needs assessments to estimate the financial and human resources needed to meet the MDG targets.

1.6. Overview of Blantyre

In 1998, Blantyre City had 502,053 inhabitants, and in 2008, 661,256 inhabitants (NSO, 1998; NSO 2008). The inter-censal population growth rate between 1998 and 2008 was 2.8 percent. Although it is not Malawi's largest city in terms of population, Blantyre City has the highest population density in the country, with 3,006 people per square kilometer (NSO, 2008). Moreover, this population is relatively young. According to the 2008 census, 48 percent of the population was under the age of 18 (NSO, 2008). Figure 2 is a map of the city showing current administrative boundaries.

Figure 2. Map of Blantyre Showing Administrative Boundaries



Source: Moumie Maoulidi (MCI), Mehuli Shah (MCI), Costly Chanza (BCA)

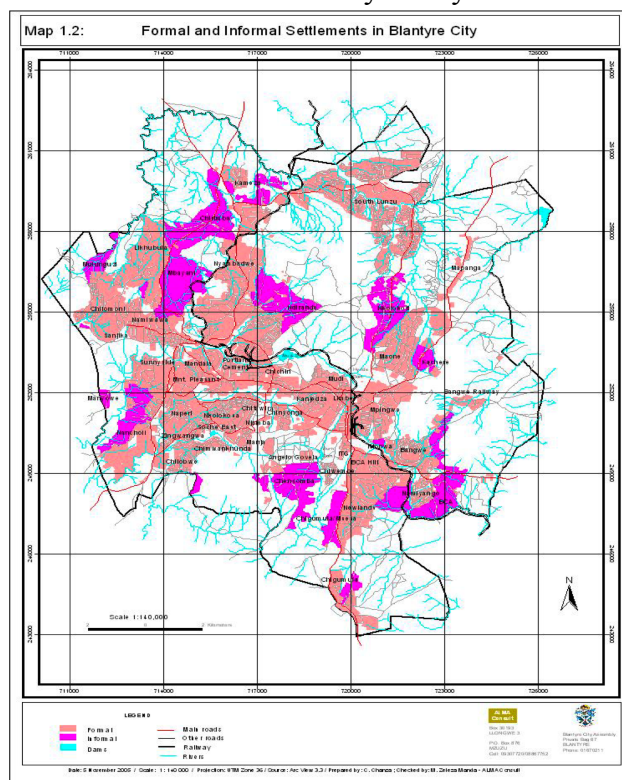
As the commercial and industrial capital of Malawi, Blantyre City is attracting an increasing number of individuals/families from rural areas seeking economic opportunities. These migrants usually end up residing in the informal settlement areas, where unemployment rates are high and poverty is rampant.

Poverty in Blantyre

Compared to their rural counterparts, citizens of Malawi's urban areas comprise a much smaller percentage of the "poor" and "ultra-poor" populations. The Malawi Second Integrated Household Survey (IHS) demonstrates that "about 25 percent of the population in urban areas is living in poverty, compared to 56 percent of the rural population" (IHS, 2005). Blantyre has a poverty rate of 23.6 percent (IHS, 2005).

Rapid population growth coupled with increasing rates of urbanization has resulted in an increasing number of people living in informal settlements and slums in Blantyre City. The huge influx of people and the lack of infrastructure to accommodate them have placed a strain on city services. Traditional Housing Areas (THA), initially conceived as sites where low-income families could build their own homes, have also become overcrowded. There are also several health challenges facing residents of informal settlements and slums. For instance, those suffering from HIV/AIDS have limited access to clinics and other health care facilities and are particularly vulnerable to tuberculosis, a disease with a high prevalence in these densely populated zones. Figure 3 shows the locations of some of Blantyre's informal settlements.

Figure 3. Formal and Informal Settlements in Blantyre City



Source: UN Habitat (2006)

HIV/AIDS in Blantyre

HIV/AIDS is a serious problem in Malawi, and the epidemic has a major impact on the education sector. Teacher attrition and absenteeism due to illness are also increasingly problematic. For instance, the 2006 Malawi Public Expenditure Review (PER) noted that the annual costs of teacher education are already \$1 million higher than they would be without HIV/AIDS (GoM Ministry of Finance, 2007). The 2006 national EMIS estimated that 1.8 percent of the teaching force died that year due to HIV/AIDS and that absenteeism was likely to cost the system up to \$2.8 million. Other HIV/AIDS-related costs involve support to orphans in the form of stipends or school fee payment and funeral costs for teachers or their dependents. The combined costs for 2006 totaled \$4 million, which means that 4.4 percent of government spending on education was directed to HIV/AIDS-related costs (GoM Ministry of Finance, 2007).

While the exact HIV prevalence rates for Blantyre City are unavailable, given that Blantyre is a major urban area, it is reasonable to assume that the rate is higher than the 2005 national prevalence rate of 14 percent.⁵ In addition, the city has an estimated 90,000 orphans, most of them under the age of 15 (GoM, 2005). The City Assembly's objective to "enhance Orphan and other Vulnerable Children's (OVC) access to quality education" requires a projected budget of 75,069,295 MWK (\$524,960) for 2008-2009.⁶ It is clear that increased funding and research needs to be devoted to the subject.

1.7. Overview of Education in Malawi and Blantyre

Malawi is one of the most densely populated countries in the world, with a newly projected population size of 13.07 million people (NSO, 2008). Between 1998 and 2008, the population of Malawi increased by 32 percent, with that growth occurring mainly in the nation's urban centers (NSO, 2008). This rapid population growth has challenged the government's ability to widen access to education.

In 2000, in response to the introduction of FPE in 1994 and the ensuing rapid increases in primary enrollments, the Government of Malawi adopted the Policy and Investment Framework (PIF), to guide the development of the education sector. PIF objectives included the implementation of universal primary education (UPE); the improvement of educational quality; and the reduction of regional, district and socioeconomic disparities in access to education (GoM Moses, 2001). In order to carry out these objectives, key policy changes were recommended, including the devolution of responsibility for primary education to District Assemblies. In 2005, the government partially began the decentralization of Malawi's educational system.⁷ This transition was still taking place in the spring of 2008, when this educational needs assessment was being conducted in the city of Blantyre.

⁵ National AIDS Commission (2006).

⁶ Exchange rate: \$1= 143.28 Kwacha. Source: www.oanda.com

⁷ The government devolved the responsibilities of certain financial and administrative functions to the District Assemblies.

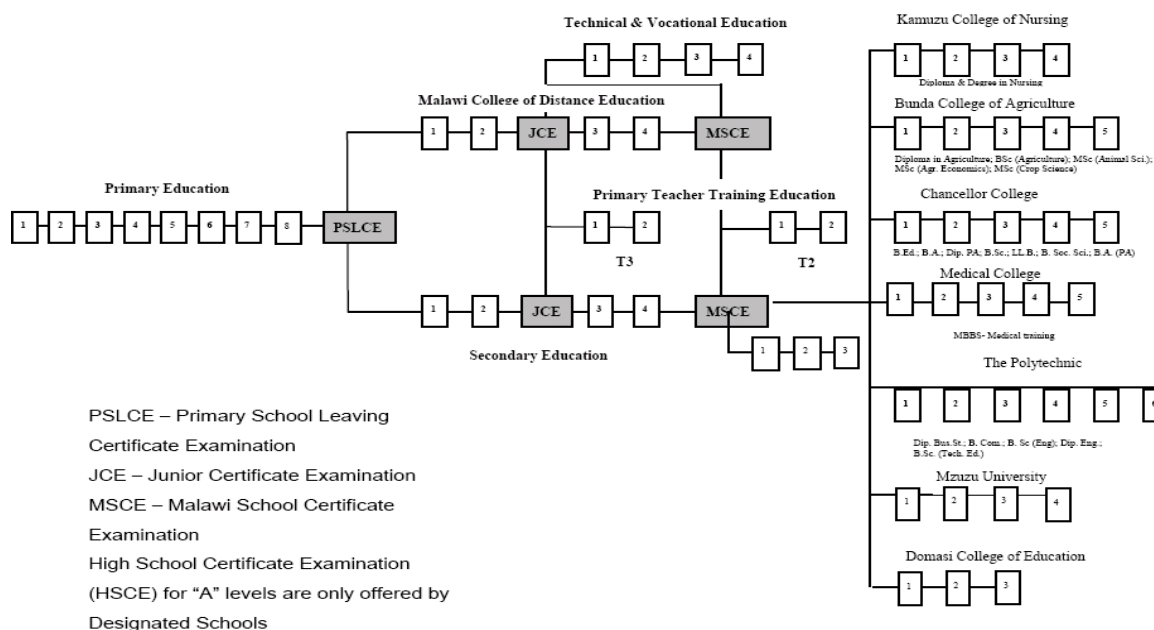
Educational provision in Blantyre is coordinated, managed and implemented by a variety of government, private and religious agencies. The South West Education Division (SWED) oversees schooling in Blantyre City and works with the District Education Office (DEO) and the MoEST to coordinate components of primary and secondary education ranging from teachers' salaries to school construction. The Association of Christian Educators in Malawi (ACEM), a religious agency, retains ownership over some schools in Malawi and coordinates the provision of education to those schools with government agencies, while the Private Schools Association of Malawi (PRISAM) is responsible for managing the private schools in the country. The District Social Welfare Office (DSWO) is involved with some types of early childhood and pre-primary education, as well as issues concerning orphans and vulnerable children. The Ministry of Women and Child Development (MoWCD) oversees adult literacy programs in Blantyre City. The substantial number of players involved in the provision of education is both a positive and negative factor affecting the education capacity of the City; both effects are discussed in further detail below.

II. PERSPECTIVES ON EDUCATION SUB-SECTORS

In 1994, four years after the World Conference on Education for All, held in Jomtien, Thailand, Malawi introduced Free Primary Education (FPE) as a step towards achieving universal primary education. The Malawian public eagerly embraced FPE, and for good reason. Eliminating school fees, textbook costs, and uniform requirements would make a basic education within reach of many of Malawi's citizens who had previously been left out of the educational process. However, the strain that FPE put on the existing educational systems had a ripple effect that is still visible today. Following the implementation of FPE nationwide, enrollment increased from 1.9 million to 3.1 million. To maintain a teacher-to-pupil ratio of 1:60, there was a need for 22,797 teachers, 38,742 additional classrooms and 30,444 teacher houses, to say nothing of classroom materials and resources (Chimombo, 2006). Without the coordinated efforts of the donor community and the internal resources to support such a significant change in policy, access increased, but quality decreased – a fact noted by parents, administrators and teachers alike, in conversations held in the course of MCI's research.

To better understand the ripple effect that FPE has had in Malawi, it is important to understand the structure of Malawi's education system. The formal structure is 8-4-4: eight years of primary education, four years of secondary education and four years of tertiary education. In addition to primary education, pre-primary and non-formal education are also considered as basic education programs (GoM, 2001).

Figure 4. National Structure of Education in Malawi



Source: EMIS (2007)

2.1. Pre-Primary Education

Blantyre is the birthplace of early childhood education in Malawi. The very first pre-school was established in 1966 at Blantyre Mission of the Church of Central African Presbyterian (CCAP) (Kholowa, 2007). As more pre-schools were established across Blantyre, an informally structured governing body, the Association of Pre-school Playgroups in Blantyre, was formed to coordinate these new groups in the area. This would later become the Association of Pre-school Playgroups in Malawi. The GoM had very limited involvement in the provision of pre-primary schooling at the outset. Today, pre-primary schooling is considered a form of non-formal education, and, like literacy and adult education programs, it is not funded or monitored by the MoEST.

The motivations for pre-primary education services differ greatly between urban and rural settings given the specific needs of the communities. The range of “pre-school” programs falls into one of six categories:

- Crèches – daycare targeted towards infants;
- Nursing – targeted towards infants to two-year-olds;
- Nursery schools – targeted towards infants to four-year-olds;
- Kindergarten – targeted towards four-year-olds;
- Playgroups – targeted towards three to five-year-olds;
- Community-Based Child Care Centers – holistic development for infants to five-year-olds (Kholowa, 2007).

For the most part, the first five subsets of pre-school education listed above are run privately and do not always have a focus on child development. Rather, they are in large measure a childcare option for working parents. They are fee-based and are mainly found in urban centers. In contrast, Community-Based Child Care Centers (CBCC) focus more broadly on a range of issues that rural communities are faced with and are run by parents and other community members. It is difficult to ascertain just how many of these different types of centers are operating in Blantyre City, as none is regulated or overseen by one governing agency. The best inventory of CBCC's was recently done by UNICEF, but again those centers are found in rural areas and not in Blantyre City itself.

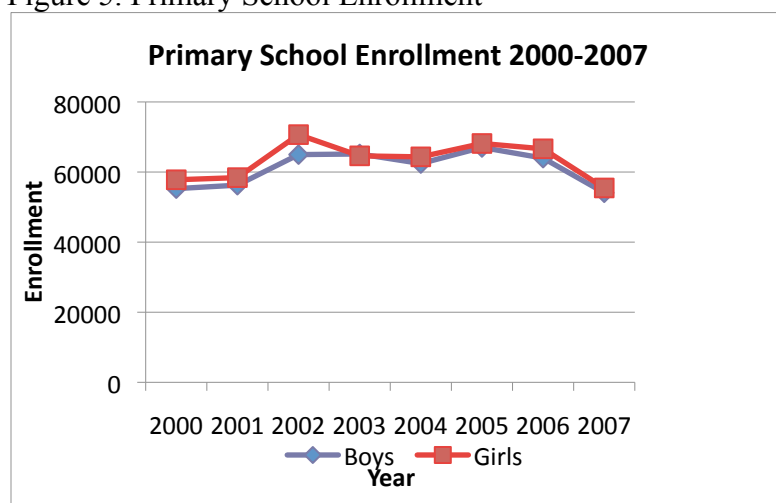
The DSWO reported to the Ministry of Gender, Child Welfare and Community Services (MoGCWCS) that there were 427 Early Childhood Development (ECD) centers in the Blantyre District in 2004 and 556 in 2005 (Kholowa, 2007). This same data indicated that in 2005, 22,260 children were enrolled at the ECD centers. However, this data is not specific to Blantyre City, and it is dramatically affected by the rapidly increasing number of CBCCs found mainly in rural settings. UNICEF has become heavily involved with CBCCs, which provide pre-primary education services in underserved rural areas that are struggling to deal with an increasing orphan population due to HIV/AIDS-related deaths. Dr. F.A.C. Kholowa at Chancellor College, whose research is on Early Childhood Development, has attributed the rising demand for pre-school education to the introduction of FPE and the decline in the quality of primary schooling. "The general need for quality learning meant that there was great demand for pre-school services, which were seen as a better way of ensuring that children are well prepared for formal schooling, since the teaching and learning conditions in primary schools were unfavorable" (Kholowa, 2007).

2.2. Primary Education

At the district level, primary schools are divided into zones and are managed by a District Education Manager and a team of Primary Education Advisors (PEAs). There were 83 primary schools in Blantyre City in 2007, divided between six education zones: Bangwe, Chilomoni, Limbe, Ndirande, South Lunzu and Zingwangwa. Of the 83 schools, 57 were government-operated, while the remaining 26 were private. The official age range for primary schooling is 6-13 years. Educational capacity can be measured in a variety of ways in the region, starting with the Gross Intake Rate (GIR) at the Division level. Blantyre City is located within the jurisdiction of the SWED, which had a 127-percent total GIR for 2007. The gender breakdown of the GIR was 125-percent male and 128-percent female. These high percentages are consistent with a national GIR of 156 percent in 2007. Clearly FPE is effective in making the initial enrollment in primary school an accessible option for a large percentage of the population. It is interesting to compare the GIR with the Gross Enrollment Ratio (GER),⁸ which in 2007 was 72 percent for males and 74 percent for females. Gender parity can be observed in both the GIR and GER, which is a positive statistic for Blantyre City. It can be seen in Figure 5 that over the past seven years, enrollment numbers for both boys and girls have remained fairly steady and high. The total enrollment for Blantyre City in 2007 was 109,500: 54,092 males, 55,458 females.

⁸ While the GIR is the number of new entrants in Standard 1 regardless of age -- expressed as a percentage of the population of the official primary entrance age -- the GER is calculated by expressing the number of students enrolled in primary school *regardless* of age, as a percentage of the population of official school age for the level.

Figure 5. Primary School Enrollment

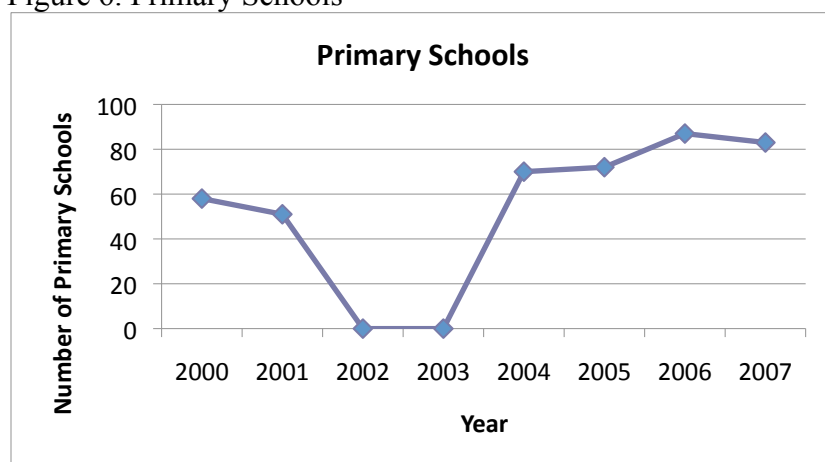


Source: EMIS (2000-2007)

Figure 5 suggests that enrollment numbers did not increase dramatically during 2000-2007, but this could be the result of declining birth rates.

The District Education Plan (DEP) 2008/2009-2010/2011 sites inadequate classrooms and schools, high repetition rates and untrained head teachers as a few of the key problems facing Blantyre City. For instance, in 2007, the classroom-to-pupil ratio was 1:114. While that is still quite high, it has decreased over the last seven years, largely due to new school construction. As Figure 6 shows, the increase in the number of schools, from 58 in 2000 to 83 in 2007, resulted in a decreasing classroom-to-pupil ratio of 1:155 in 2000 to 1:114 in 2007.⁹

Figure 6. Primary Schools



Source: EMIS (2000, 2001, 2004, 2005, 2006, 2007)

Note: No data were available for 2002/2003

⁹ Source: EMIS records

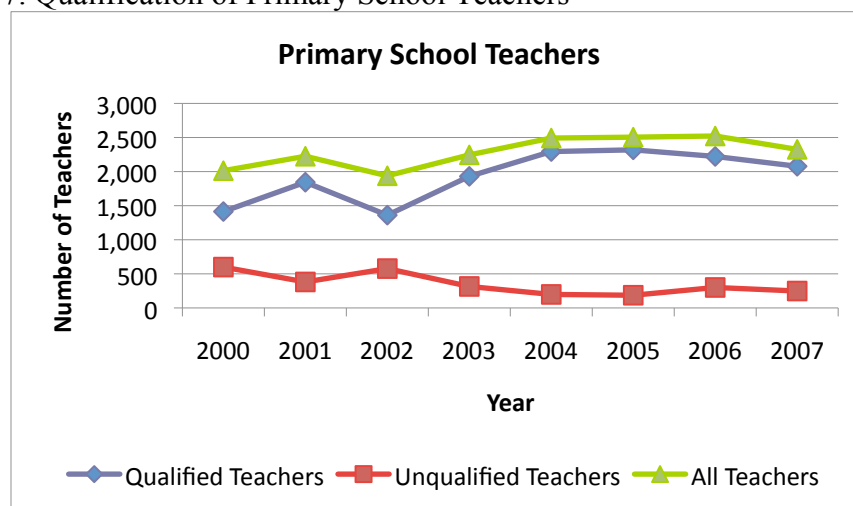
The scarcity of resources can also be seen in the student-to-desk ratio, which was 20:1 in 2007.¹⁰ Clearly, students are learning in overcrowded classrooms, which inevitably has an impact on the quality of education. In informal interviews with administrators and teachers, the issue of inadequate resources in the classrooms was invariably discussed as a critical impairment to the learning environment.



Students in Primary School in Blantyre City. Photo: © Katharine Torre

Shortages of qualified teachers is another persistent problem. In order to address the problems of overcrowded classrooms and overworked teachers, Blantyre City was forced to hire under-qualified teachers. Typically, each primary school teacher should have at least a Primary School Leaving Certificate (PSLC). However, after FPE, in an effort to keep up with increasing enrollments, many teachers were recruited without having met this qualification. In addition, unqualified teachers did not receive adequate preparatory or remedial training.

Figure 7. Qualification of Primary School Teachers



Source: EMIS (2000-2007)

¹⁰ Ibid.

Facing overcrowded classrooms without the appropriate experience and training, many of these new teachers quickly became demoralized. In 2000, six years after the introduction of FPE, there were still 599 unqualified teachers in Blantyre City schools. Instead of the traditional two-year period of teacher education, the emphasis has switched to more on-the-job and in-the-classroom training. By 2007, the number of unqualified teachers had dropped to 248.

Table 1: Primary Teacher-to-Pupil Ratios 2000-2007

Year	Teacher-to-Pupil Ratio	Qualified Teacher-to-Pupil Ratio
2000	1:56	1:80
2001	1:51	1:62
2002	1:70	1:97
2003	1:58	1:67
2004	1:51	1:55
2005	1:54	1:57
2006	1:53	1:59
2007	1:47	1:53

Source: EMIS (2000-2007)

Increasing access to educational services was a bold step for the Malawian government to take toward meeting the MDGs. However, as education scholar Joseph Chimombo has stated, “the evidence from Malawi suggests that unless attention is paid to the quality, relevance and fit of primary schooling, the possibility that it can contribute to a pro-poor strategy is unlikely to be realized” (Kadzamira and Rose, 2003; Chimombo 2005; Chimombo, 2006).

2.3. Secondary Education

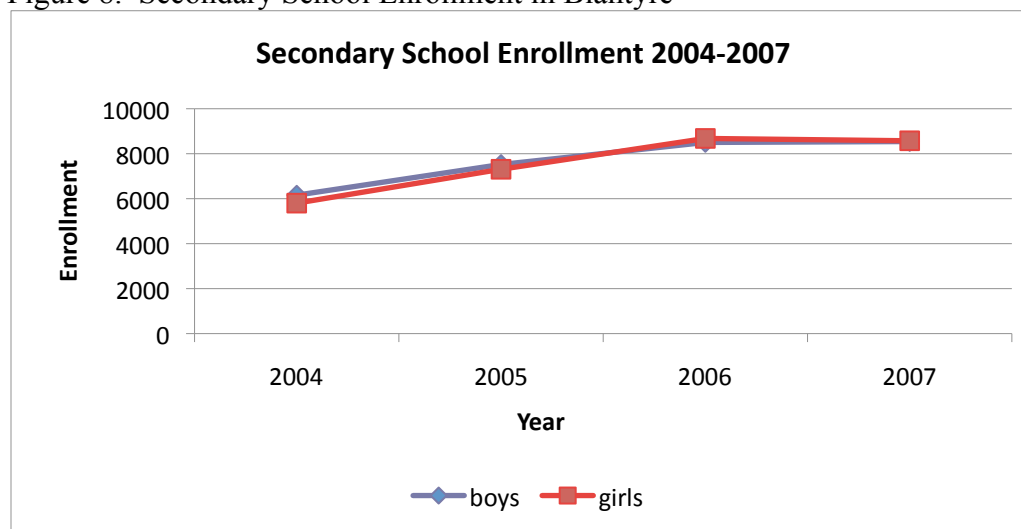
Secondary education is composed of two cycles. After the first two years, students take the Junior Certificate for Education exam (JCE). Those who pass and are able to continue their education will complete two more years before taking the Malawi School Certificate of Education exam (MSCE). The most employment opportunities are available to those who pass the MSCE. A student’s ability to pass the MSCE is dramatically affected by what type of secondary institution he or she attends. Regarded as a “traditionally elitist” system, the secondary school system in Malawi has undergone major structural changes in the wake of FPE, in order to deal with the increasing number of students who pass the Primary School Leaving Certificate examination (PSLCE) (PIF, 2001). Unlike with primary education, the government is not the sole proprietor for secondary education, and many of the higher quality options available involve fees that are out of reach for most Malawians. The secondary school system is composed of three types of schools: conventional secondary schools (CSSs), community day secondary schools (CDSSs) and private schools. However, the funding make-up of these schools is somewhat perplexing. Government schools, both CSSs and CDSSs, charge fees and receive government funding, while grant-aided schools receive capitation grants from the government. Private schools receive no government funding. CSSs are regarded as the elite secondary institutions and are only able to accommodate a small percentage of the population.

CDSSs are generally established by communities and compose the majority of Malawi’s secondary schools. In rural areas, they are often the only secondary schools available. Formerly

known as Distance Education Centers, CDSSs underwent the most striking changes post FPE. In 1998, Distance Education Centers were reclassified as CDSSs, in the hope that these redesigned schools would partner with local CSSs; that facilities such as laboratories and libraries would be upgraded and stocked with materials; and that teachers' qualifications would improve due to the enhanced resources allotted. Due to changed financial circumstances, however, the government was actually left with little support to implement these changes, and the future of CDSSs remains uncertain. The majority of teachers in these facilities are primary school teachers and the quality of education available in CDSSs suffers because of this under qualification (World Bank, 2004). Essentially, a dual system of secondary education operates in Malawi. As an urban area, Blantyre City is lucky to have multiple options for secondary schooling; yet the same problems afflicting rural CDSSs are also present in the urban context. Addressing deficiencies in CDSSs is a main component of the DEP in terms of secondary education.

Enrollments in secondary schools also experienced a huge increase following FPE. Since 1990 high school enrollment has more than quadrupled on a national scale – increases seen in every region of the country (World Bank, 2004). In Blantyre the numbers continued to rise until 2006, when they leveled off, and they actually declined moderately in 2007, from 17,180 to 17,116. While in many areas of the country girls do not enjoy equal access to secondary education, this is not the case in Blantyre.

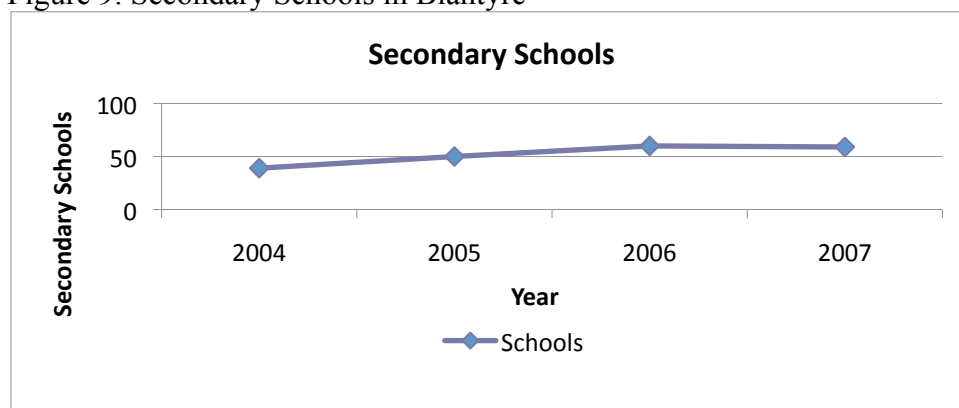
Figure 8. Secondary School Enrollment in Blantyre



Source: EMIS (2004-2007)

The number of schools in Blantyre City has also risen in recent years to accommodate the increasing number of students who pass the PSLCE. In 2004 there were 39 schools; in 2005 the number had risen to 50, in 2006 to 60, and then the number appears to have leveled off in 2007, with 59 documented schools. In 2007, Blantyre City had 29 public secondary schools, of which only 11 are conventional CSSs and 18 are CDSSs. There were 28 private schools and two grant-aided schools, for a total of 59 secondary schools (56 urban and 3 rural).

Figure 9. Secondary Schools in Blantyre

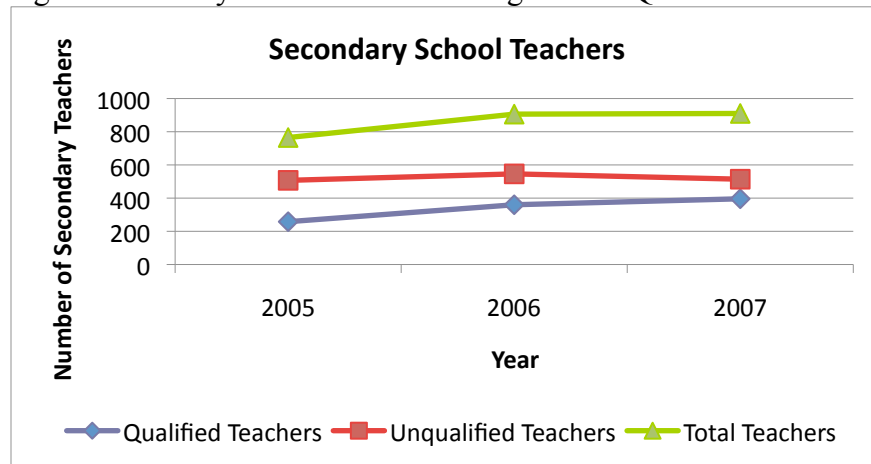


Source: DEMIS (2007)

However, in addition to the construction of new schools, the construction of science laboratories is critical to improving educational quality. The DEP estimates that only 34 percent of secondary schools in the district have laboratories, even though the PIF goal is 100 percent. The issue of inadequate schools/classrooms is identified as the top priority in the DEP 2008/2009-2010/2011. For example, the Chilomoni zone does not have one conventional secondary school or an approved CDSS. The ACEM estimates that on a national level, CDSSs are being rehabilitated at a rate of only 20 per year (ACEM, 2008). It is critical that the Blantyre City Assembly address this issue.

There are also differences in qualified teacher-to-pupil ratios. In unapproved CDSSs, of which there are 16 in the city, the qualified teacher-to-pupil ratio was 1:80. In the two approved CDSSs, it was 1:116. In the government boarding school (CSS), it is 1:16, and in the government day school (CSS), it was 1:24. In grant-aided schools, the qualified teacher-student ratio is 1:18, in private schools, 1:22. The disparities are startling. As depicted in Figure 10, there are far more unqualified than qualified teachers.

Figure 10. Blantyre Teachers According to their Qualifications



Source: EMIS (2005-2007)

The consequences of the high number of unqualified teachers are evident in “secondary school leaving examination” results. In 2006, out of the 2,572 students who took the MSCE, only 1,208 students passed, resulting in a 53-percent failure rate. Of the 1,364 students who failed, only 301 were able to repeat (BCA, 2007). By strengthening the capacity of CDSSs through improved teacher education and increased school infrastructure funding, these deficiencies can begin to be addressed.

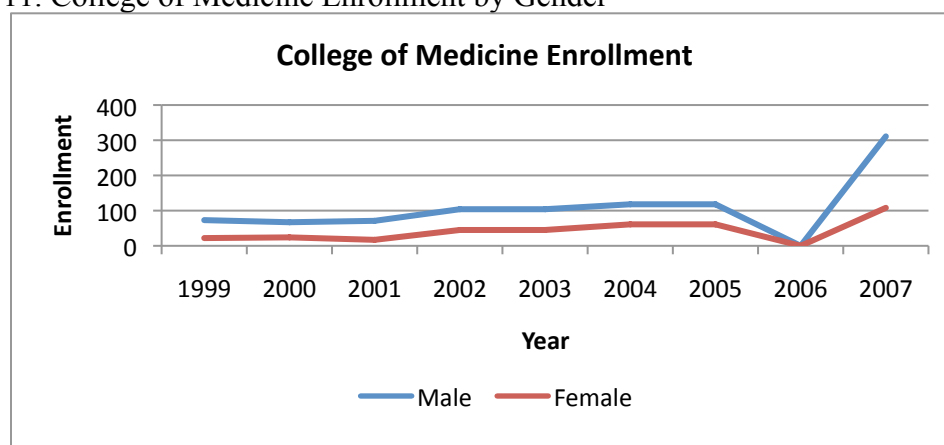
2.4. Tertiary Education

The University of Malawi (UNIMA) is the main provider of university education. Other major centers of higher education are Domasi College of Education and Mzuzu University. The Policy Investment Framework of 2001 estimated that only 0.5 percent of 18-23-year-olds are enrolled in tertiary education in some form. Aside from the small percentage of the population with access to tertiary education, there is a lack of gender equity, with females constituting only a quarter of the university population (Chimombo, 2003).

Other institutions of higher education located in Blantyre City include the College of Medicine; a satellite campus for the College of Nursing; a Polytechnic; Soche Technical College; and the Blantyre Teacher Training College (BTTC). The decentralized structure of UNIMA made it difficult to collect data at the individual school level. Although permission was obtained by MCI from the central office in Zomba, data is stored at the campus level, and despite attempts to gather data at the satellite campus for the College of Nursing, enrollment numbers were unfortunately unavailable. Therefore, to maintain consistency, only official EMIS data was used in relation to UNIMA institutions.

Figures 11 and 12 illustrate the gender gap at each institute of tertiary education in Blantyre.

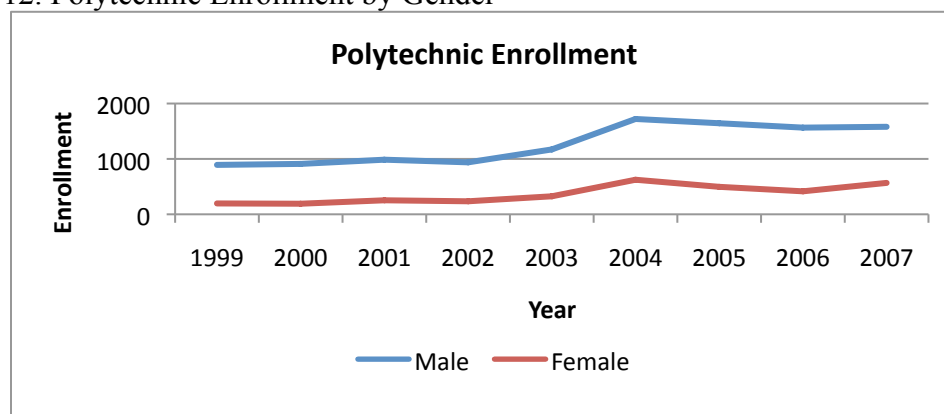
Figure 11. College of Medicine Enrollment by Gender



Source: EMIS (2007)

Note: No data were available for 2006.

Figure 12. Polytechnic Enrollment by Gender



Source: EMIS (2007)

TEVET oversees Soche Technical College. Programs at Soche include brickwork, carpentry and joinery, painting and decoration, plumbing, secretarial studies and accounting. As of May 2008, there were 238 male students and 74 female students enrolled. BTTC reports to the Department of Teacher Education and Development (DTED) in Lilongwe, which oversees various teacher-training institutions in Malawi. In May 2008 there were 449 male students and 361 female students. The PIF has staked out an increase to 50 percent in the female student population as one of its primary goals for tertiary education, along with an overall increase in the tertiary student population to 12,000 enrolled.

2.5. Adult Literacy

The Public Expenditure Review 2006 states that a minimum of five to six years of schooling are required to ensure lifelong literacy and numeracy. Considering that 70 percent of drop-outs occur between Standards 1-4, it is understandable that the United Nations Educational, Scientific and Cultural Organization has estimated that roughly five million Malawians over the age of 15 are illiterate (UNESCO).

Adult literacy programs are overseen by the MoGCWCS and are focused mainly in rural areas. It was q difficult to gather solid information regarding literacy programs in Blantyre City, given the loose coordination between the City Assembly, the MoGCWCS and the District Social Welfare Office in providing these programs. The National Adult Literacy Programme is run mainly by volunteer instructors and selected by local committees, which have assumed the implementation authority previously held by the City Assembly for the rural areas, as well as the following responsibilities:

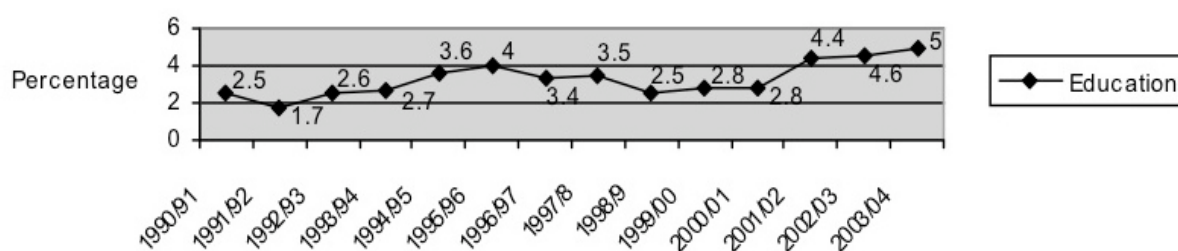
- Conducting awareness/campaign meetings with community leaders;
- Recruiting and training adult literacy instructors;
- Paying instructors' honoraria;
- Organizing and training new literacy committees;
- Conducting refresher courses for instructors and literacy committees;
- Supervising adult literacy instructors/facilitators;
- Conducting learner assessment at the end of a 10-month learning cycle;
- Organizing certificate presentation ceremonies.

There needs to be increased coordination between the MoEST and the MoGCWCS in the provision of adult literacy programs, particularly in urban areas.

III. FINANCING OF EDUCATION

Malawi was one of the first countries in the southern Africa region to introduce Free Primary Education in 1994 (Chimombo, 2005). However, this move required substantial increases to the education budget, obliging the GoM to restructure the national budget to accommodate the increased need for teacher salaries, construction, textbooks and other related costs, for which the government then turned to the donor community. The chronic underfunding of education in Malawi as compared with other countries in the region made the undertaking that much more challenging (Chimombo, 2006). Figure 13 shows Malawi's longstanding struggle to sustain the level of funding required to support FPE.

Figure 13. Education Recurrent Expenditure as a Percentage of GDP



Source: Chimombo (2006)

After the initial years following the introduction of FPE, financing for education experienced a decline, demonstrating the difficulty of sustaining FPE without a coordinated commitment from the donor community. The EMIS data presented in this report, in conjunction with MoEST targets and financial information, articulates clearly the need for increased funding in specific areas such as teacher education.

While there has been a push to decentralize the provision of education in Malawi, school funding is still handled mostly at the national level. The MoEST, individual households and international donors make the most significant contributions towards the provision of education at the district and city levels. The United Kingdom's Department for International Development (DFID), Malawi's largest donor in the area of education, is a major funding source for the ministry, particularly as regards school construction.

In the absence of publicly available official budget information, it was difficult to ascertain what the specific contributions of the City Assembly are to the education budget. BCA financing is focused largely on administrative costs for the district education office, as well as some operational costs for schools such as power and water. However, the national-level data make it possible to evaluate the current financial situation for education or to establish various unit costs and to track fluctuations in overall spending from year to year. This discussion therefore focuses

primarily on the contributions of the MoEST, given its dominant role in financing education nationwide.

In 2003/04, government expenditure on education as a percentage of GDP was 5.3 percent, and it was projected that this spending on education would increase (GoM Ministry of Finance and World Bank, 2006). In the 2006-2009 budget framework, the education sector was allocated 29 billion MWK (\$205.7 million)¹¹, or 13 percent of the national budget. This falls well short of the recommended 20 percent allocation required to reach Education For All (EFA) goals (SDNP, 2008). The largest of these was teacher salaries; other recurrent expenditures included instructional materials, such as learning guides and textbooks, and operating expenses. Malawi fell just below of the minimum recommended amount, at 49.2 percent in 2007 (Ministry of Finance, 2006). The GoM must increase its allocation to primary education in order to sustain FPE and improve the quality of education, particularly in rural communities. Capital or development expenditures generally include construction costs for classroom blocks, latrines and hostels, as well as equipment costs for desks and other necessary furniture.

Table 2 presents the projected recurrent expenditures as specified in PIF (2000). As can be seen here, by far the greater share of expenditures was dedicated to primary education.

Table 2: Projected Recurrent Government Expenditure (in million MWK)¹²

	2012	%
Projected Govt. Recurrent Funds to Education Sector	2190	
Basic Education	1522	69%
Secondary Education	323	15%
Primary Teacher Education	86	4%
Secondary Teacher Education	33	2%
University Education	130	6%
Administration & Support	44	2%

Source: PIF (2000), Table 6.1

3.1. Unit Costs

Table 3 below presents some of the unit costs used in this study to project the financial resources needed in order to meet MDG 2 and Target 4 of MDG 3 in Blantyre City. These unit costs were derived from the 2005/2006-2007/2008 and the 2008/2009-2010/2011 Blantyre City Assembly District Education Plans (DEP). Additional sources consulted for unit costs include EMIS booklets and such budget documents as PERs.

First, a unit cost to build a classroom, a staff room and a toilet was determined. Then this infrastructure unit cost was multiplied by the number of facilities to build each year. It can be seen in Table 3, however, that the unit costs increase drastically in the 2008/2009-2010/2011

¹¹ Exchange rate of \$1=141 MWK, as of May 2008. Source: www.oanda.com.

¹² These figures are in constant Malawi Kwachas (i.e. they do not take inflation into account).

DEP. Consequently, an average infrastructure unit cost, which was essentially an average of the unit costs found in the two DEP documents, was also calculated.

The unit cost for textbooks was MWK 136 (\$0.95), and the unit cost for desks was MWK 4,068 (\$28). The per-pupil unit cost for school feeding programs was 400 MKW (\$2.87) in 2008. In Blantyre City, Mary's Meals is the sole provider of school feeding programs and relies heavily on parent involvement to run the program at each primary school. It is more difficult to ascertain the exact unit cost of primary school construction, as it differs between school sites and also fluctuates depending on the donor organization. According to the Facilities Management division at the SWED, the average cost per classroom is 2,801,610 MWK (\$19,870).

Table 3: Select Unit Costs

		Total Cost	2005/2006	2006/2006	2007/2008	Unit Cost	Unit Cost
Primary Education						(MWK)	(USD)
Construction of new schools	3 schools	23,652,570	7,884,190	7,884,190	7,884,190	7,884,190	55,134
Construction of classrooms	18 classrooms	22,653,135	7,551,045	7,551,045	7,551,045	1,258,508	8,801
Construction of new latrines	30 latrines	4,038,090	1,346,030	1,346,030	1,346,030	134,603	941
Procurement of desks	3,063 desks	12,459,755	4,153,251	4,153,251	4,153,251	4,068	28
Secondary Education						(MWK)	(USD)
Construction of new schools	9 schools	23,652,570	7,884,190	7,884,190	7,884,190	2,628,063	18,378
Construction of classrooms	9 classrooms	3,775,522	1,258,507	1,258,507	1,258,507	419,502	2,934
Construction of laboratories and equipment*	6 labs & equipment	12,323,550	4,107,851	4,107,851	4,107,851	2,053,925	14,363
	No. of Units	Total Cost	2007/2008	2009/2010	2010/2011	Unit Cost	Unit Cost
Primary Education						(MWK)	(USD)
Construction of new schools	6 schools	483,533,820	161,177,940	161,177,940	161,177,940	80,588,970	563,559
Construction of classrooms	300 classrooms	840,483,000	280,161,000	280,161,000	280,161,000	2,801,610	19,592
Procurement of desks	30,000 desks	450,000,000	1,500,000,000	1,500,000,000	1,500,000,000	15,000	105
Secondary Education						(MWK)	(USD)
Construction of new schools	9 schools	811,440,977	270,480,326	270,480,326	270,480,326	90,160,109	630,490
Construction of laboratories and equipment*	20 labs & equipment	190,273,020	63,424,340	63,424,340	63,424,340	9,513,651	66,529

Source: DEP (2005), Table 3.1 and DEP (2008), Table 3.2

3.2. The Model

The costing tool utilized in this education assessment is UNESCO's EPSSim (Education Policy and Strategy Simulation Model), which enables the user to estimate the resources needed to reach the policy targets set by the Government of Malawi, as well as the MDGs, under a variety of conditions. When fed the unit costs discussed in the previous section, as well as pertinent data regarding student enrollment, pupil-to-teacher ratio, promotion, repetition, drop-out rates and the status of infrastructure and materials, EPSSim is able to generate different scenarios

designed to outline options for the City of Blantyre to consider, when setting priorities aimed at reaching the education MDGs.

Two scenarios, a Baseline and an Alternative scenario, are presented in this report, to highlight how Blantyre City might meet its targets and what resources would be required to do so. Local education officials are clearly best placed to determine those approaches most appropriate to meeting the needs of Blantyre's diverse student population and to advise the BCA and Blantyre stakeholders as to which elements should be included in a new City Development Strategy.

Baseline scenario

This scenario estimates the cost of achieving universal primary education by 2015. At the primary school level, the target is to reduce the pupil-to-teacher ratio to 60:1, which, although not in line with EFA standards, is nevertheless projected in the DEP as the target. Interestingly, Blantyre City already exceeded this goal in 2007, with 47 students per teacher. When the qualifications of the teachers are taken into account, these numbers change to 53:1. Repetition rates are based on MoEST targets of five percent in Standards 1-7 and two percent in Standard 8, for both male and female students. At the secondary level, the average number of hours per week in the classroom is 25, based on MoEST targets, and the teacher-to-pupil ratio is 1:37. The number of classrooms in 2007 was 987, the number of toilets was 1,263. The model projects that the total number of new classrooms, toilets, staff rooms and other rooms needed between 2010 and 2015 would be respectively 1090, 946, 42 and 362. The infrastructure unit cost in this scenario is MWK 2,993,200 (\$20,890).

Alternative scenario

This scenario estimates the cost of achieving universal primary education by 2015 when there are more double-shift classes. Given that there is a shortage of teachers, double-shift schooling may enable the authorities to make better use of scarce human resources.¹³ Whereas in the Baseline model, 17 percent of the classes are double shift, in the Alternative scenario, 37 percent of the classes are double shift. Blantyre education authorities may consider using this model to maximize cost-effectiveness.

The Alternative scenario model projects that the total number of new classrooms, toilets, staff rooms and other rooms needed between 2010 and 2015 would be respectively 853, 732, 33 and 298. The infrastructure unit cost in this scenario is MWK 2,030,059 (\$14,168).

The EPSSim results from the Baseline and Alternative scenarios are presented below, in Table 4.

¹³ A 'double-shift' system describes schools which have different pupils in the mornings and afternoons, but the same number of classroom hours as pupils in single-session schools.

Table 4: Results for the Baseline and Alternative Scenarios

Baseline scenario	2010	2011	2012	2013	2014	2015	Annual Average
Total Public Primary (MKW)	1429	1940	2707	3764	5231	3714	3131
Recurrent costs	709	729	772	846	956	1101	852
Capital costs	720	1211	1935	2918	4276	2613	2279
Total Public Primary (USD)	10	14	19	26	37	26	22
Recurrent costs	5	5	5	6	7	8	6
Capital costs	5	8	14	20	30	18	16
Alternative scenario							
Total Public Primary (MKW)	999	1296	1742	2347	3173	2462	2003
Recurrent costs	673	680	706	760	841	949	768
Capital costs	326	616	1035	1588	2332	1513	1235
Total Public Primary (USD)	7	9	12	16	22	17	14
Recurrent costs	5	5	5	5	6	7	5
Capital costs	2	4	7	11	16	11	9

IV. CONCLUSION AND RECOMMENDATIONS

While Blantyre City has taken significant steps towards achieving the Millennium Development Goals in universal primary education, major deficiencies remain in the areas of early childhood development, secondary education and adult literacy. Huge inequities continue to limit access to high-quality education, as well as to education at the secondary and tertiary levels.

The introduction of FPE was a defining moment for the education system in Malawi. However, this mandate was undertaken without sufficient domestic or official donor financing, and has placed an immense strain on the financial, physical and human resources within the system, resulting in a drop in the quality of education received in public schools. One unintended consequence has been to reinforce a dual system of education: one for the majority of the population, and one for those able to afford to send their children to private schools.

At the primary school level, priorities include the need to further improve infrastructure, to reduce the classroom-to-pupil ratio and to improve sanitary facilities. The City of Blantyre and the Government of Malawi can also do more to improve the provision of teaching and learning materials as a means to strengthen the quality of education. They can enhance teacher qualifications by offering more in-service training and other professional development opportunities available at the Teacher Training colleges. Additionally, the city of Blantyre should consider expanding the double shift system at the primary school level.

At the secondary school level, the disparity between CDSSs and CSSs needs to be corrected by building more community day secondary schools. In addition, as the Blantyre City Assembly District Education Plans recommend, more science laboratories should be built and a reinvigorated, coordinated effort between donor organizations and the City Assembly should strive to make secondary school financially feasible for a larger portion of the population.

This needs assessment estimates that with a slate of interventions such as those recommended here, the City of Blantyre can achieve the education Millennium Development Goals by 2015, given an annual per capita expenditure between 2010 and 2015 of \$22.

For this to succeed, it is essential that the MoEST and the City Assembly of Blantyre develop a coordinated donor assistance program to meet the priorities set by the Policy Investment Framework and the District Education Plans. However, it is also critical that assistance programs not undermine national or local ownership, so as to ensure the thorough realization and sustainability of domestic and local policy initiatives (Chimombo, 2006).

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