

## Chapter 2 The Malawian context

This chapter initially focuses on how things are in Malawi: [poverty](#), what goes on in [primary schools](#), and the teaching and learning of [mathematics](#) in those classrooms. As a result of recognising the situation in schools there is a section about [Malawian teacher preparation](#) and development. The final section looks at some fruits of [Malawian policy making](#). Chapter 3 completes the literature review by looking more widely at Sub-Saharan Africa.

At the end of each sub-section I suggest some questions yet to be answered and indicate where they relate to my own research. Most of these are taken up in the research program. These, and related questions in Chapter 3, are drawn together and related to the research categories at the end of Chapter 3.

Much has been written about African education, and indeed much about education in Malawi. Most of it is descriptive, and has been written by the many NGOs active in education in the region. It usually takes for granted the international agendas for helping the majority world to 'catch up' with the West. Most of this material is statistical in nature, providing poverty rates, literacy rates etc. and attempting to draw direction from the 'big picture' provided by such data. In this approach the mechanisms for change, such as policies and their implementation processes, are unexamined. The voices of local people whom the statistics describe, and who must implement change, are missing. One aim of my research was to give the people a voice.

### 2.1 An introduction to Malawi

Malawi is a poverty-stricken land-locked country in southern Africa. It was formerly known as Nyasaland, 'The land of the lake'. Malawi is one of the poorest countries in Sub-Saharan Africa and some of that context is sketched in the four sections that follow.

#### 2.1.1 Food security in Malawi

The 1998 Malawi Integrated Household Survey recently provided data on the level and incidence of poverty in Malawi. Using the per capita consumption measure of poverty, they set the poverty line at what is equivalent to US\$120 per year. Nationally 65% of the total population were below that line, and 67% in rural areas (Malawi, National Economic Council, 2000). Taking a level of 60% of the poverty line as US\$72 per year, 28.7% of the population were living at extreme poverty (Government of Malawi, 2002).

The 2007 population estimate was 13.6 million, leading to a population density of 142 persons per square km. Malawi is the most densely populated country in Africa. The Zomba region in which the empirical component of this study took place lies in the south east; its population density is just above the national average (National Statistical Office, 2001).

Although the Malawian climate is supportive, the land is poorly farmed with little rotation of crops or use of fertilisers (Ellis et al, 2002, p. 4).

The nutrient content of soils is considered to be depleted in many parts of Malawi, and to be declining over time due to failure to replace organic matter, and low fertiliser use.  
(Ellis et al, 2002, p. 22)

Consequently the land is tired. Because of the tiny farm plots in use in many parts of the country and the inability of farmers to obtain fertilisers, machinery, or other means to improve productivity, the land is frequently unable to support the people who live on it.

The majority of rural families confront such severe constraints that they have no room to manoeuvre, and the occurrence of shocks such as floods or poor rainfall quickly

push them into requiring emergency food relief. The multiple constraints include small and declining farm sizes, lack of livestock as a substitutable asset, deteriorating civil security in villages, prevalence even in normal years of food deficit from own production, low monetisation of the rural economy, little cash in circulation, and institutional blockages to breaking out of established livelihood patterns. (Ellis et al, 2002, p. 22)

The staple in the Malawian diet is maize, although some families are able to grow other crops for food, or even cash crops, such as tobacco.

One of the major goals of the Malawi Poverty Reduction Strategy (MPRS) is the promotion of good nutrition. Four types of safety nets are being put into place to assist those most in need – the chronically poor. These include packages of enough seed and fertiliser to be sure of a good crop in the following year, food (or cash)-for-work schemes to improve the rural infrastructure, 'targeted nutrition programmes' for young children and their mothers, and disaster relief. (Government of Malawi, 2002, p. xiv)

The other item of critical importance in rural areas is water. In many areas supplies are very poor; women often travel large distances to a well to collect enough water for their large family for the day. Without rainfall the crops will die, families will starve and there will be no seeds to plant for the next year. In the 1990s Malawi suffered three chronic droughts and one massive flood between them. In late 2005 just after my visit, there was another extreme drought in southern Malawi.

### **2.1.2 Health in Malawi**

The health of its citizens is of major concern to Malawi. It impacts on life at all levels including education. Prevention of illness works at the level of nutrition, sanitation and water supply.

Statistics show that 49 percent of children are stunted (height for age); 25 percent are under weight and 6 percent are wasted. In addition, malnutrition has caused widespread mental retardation. For the past decade there has been no significant improvement in the nutritional status. (Government of Malawi, 2002, p. 63)

To improve nutrition, the government's strategies include the promotion of breast-feeding to ensure the best start to life for babies. Another direction is the diversification of diet, particularly emphasising cereals other than maize; education will have a substantial role in changing attitudes among the population at large. In a subsistence economy diversification of food crops is related to this and again schools in their relationships to their local communities have an important function to show what can be done.

In 2005 the life expectancy at birth in Malawi was 40 years (UNICEF: Statistics). This was heavily influenced by the HIV/AIDS pandemic, and other factors described below. Childbirth continues to be a large risk for mothers and children. Over 1% of mothers die in childbirth, and about 10% of babies die in the first year. A further 9% of those born will die before the age of 5. Despite this, the crude birth rate continues very high: about 5% will be added to the population each year. The crude death rate is simply the percentage of the population that dies each year. In 1998 this was 2.1%, and was somewhat higher for males than females (Government of Malawi, 2002).

### **2.1.3 HIV/AIDS in Malawi**

Many deaths may be put down to AIDS. However the actual causes are many; it is HIV/AIDS that leaves the sufferer with no way to fight any disease. It is estimated that the incidence of HIV/AIDS is about 15%, one of the highest rates in the world, with the young adults being the worst hit group. Naturally this affects many teachers and the parents of many children, creating many orphans. Many children themselves are born with HIV. Many grow up in an

atmosphere of disease and death. The educational impacts are further discussed below (section 2.2.9).

Traditional customs and taboos existed to restrict extra-marital sex, so when it clearly had occurred, leading to HIV infection, denial was the first reaction. For many years the churches 'considered "immorality" and God's resultant "wrath" [as responsible] for the epidemic', even preventing the use of condoms (Lwanda, 2003). Lwanda describes the tendency to deny AIDS in public discussion but reveals that popular songs in Chichewa often discuss the heterosexual issues involved in AIDS, but in coded forms. This music reaches many more Malawians than do newspapers or books, and so people are learning via popular music.

The Poverty Reduction Strategy (Government of Malawi, 2002) has this to say:

Just as poverty deepens the HIV epidemic, the epidemic also deepens poverty in a serious vicious cycle. ... HIV/AIDS erodes gains made on reducing poverty at a faster rate than any attempt to improve the poverty situation. Therefore, efforts to reduce poverty must go hand in hand with efforts to contain the HIV/AIDS epidemic.

(Government of Malawi, 2002 p. 87)

Strategies for containing AIDS follow three fronts; education is involved in the first of them.

- 'The first strategy is to prevent HIV infection among the youth so as to maintain a youth free of HIV infection. This will involve incorporating HIV/AIDS in school curricula at all levels including teacher-training colleges.'
- 'Improve the quality of life for those infected with HIV/AIDS', principally by improving availability and cost of suitable drugs.
- 'Mitigate against the Economic and Social Impacts of HIV/AIDS' by providing support frameworks for those most clearly affected, 'such as orphans, widows, widowers and households.'

(Government of Malawi, 2002)

#### **2.1.4 Rural poverty in Malawi**

The Malawi Government's Poverty Reduction Strategy lists the following as the chief causes of poverty: limited access to land, low education, poor health status, limited off-farm employment and a lack of access to credit (Government of Malawi, 2002).

It is significant that each of these positive steps to be taken require a population to be numerate in order to both create the situation, and to take advantage of it once it has taken place. So, for example, to establish a situation where credit can be offered requires merchant banking skills, and to make use of credit requires a considerable understanding of the workings of financial investments. Both of these are essentially numerate activities.

In order to adequately describe the village economies in rural Malawi, the following table is reproduced from Ellis et al (2002): *Livelihoods and Rural Poverty Reduction in Malawi*, a publication of the UK-sponsored LADDER project. As Ellis et al (2002) put it,

In the context of the Malawian customary tenure sector, the term "better-off" is quite relative and does not signify wealth or income status much above the poverty line.

The table splits households into four income groups, and describes the characteristics of each group in a number of categories.

**Table 2:** Characteristics of Wealth Groups in Malawi Sample Villages

<i>Assets</i>	<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	Table 2.1
House	brick walls, cement floor, iron or thatch roof	well built thatched house	mud walls, thatch roof	dilapidated house or homeless	
Land Owned	3-5 acres or more, may rent in land	1-2 acres	0.5-1 acre, may rent out land	less than 0.5 acres or do not own land	
Livestock	up to 5 cattle, 3-5 goats 15-20 chickens	no cattle, 1-2 goats, 5-15 chickens	no cattle, no goats 1-5 chickens	no livestock	
Food Security	food secure all year, may sell some grain	harvest lasts 4-7 months, then food insecure	harvest lasts up to 4 months, then insecure	food deficit most of the year	
Labour Market	hires labour seasonally	may hire labour seasonally, but also sells labour	relies on seasonal <i>ganyu</i> *	depends entirely on <i>ganyu</i> or safety nets	
Other Assets	up to 2 bicycles, radio/cassette, spring bed, ceramic plates, implements	1 bicycle, radio, wooden bed, metal plates, implements	1 or no bicycle, sleep on mats, plastic utensils	no bicycle, sleep on rags, plastic utensils, & clay pots	
Other Activities	may own shop, lodgings, bar, trading, milling	may do trading, beer brewing	some do petty trading	(reported as mainly female headed hhs or the elderly)	

Source: wealth ranking conducted in 8 villages in June-October 2001

Note: \* *Ganyu* refers to casual labour on other's farms, for payment in cash or kind. (Ellis et al, 2002)

Malawi has had international assistance in the area of poverty reduction since 1981. For a variety of reasons, most of these had limited success. 'Inconsistent implementation ... led to only short-lived economic recovery and failed to create sustainable broad based growth. Further, many of the high cost of adjustment were borne by the poor.' (Government of Malawi, 2002, p. xi).

The 2002 Poverty Reduction Strategy is trying to learn from the past experiences, and is built around four 'pillars'.

These pillars are the main strategic components grouping the various activities and policies into a coherent framework for poverty reduction. The first pillar promotes rapid sustainable pro-poor economic growth and structural transformation. The second pillar enhances human capital development. The third pillar improves the quality of life of the most vulnerable. The fourth pillar promotes good governance. The MPRS also mainstreams key cross-cutting issues, such as HIV/AIDS, gender, environment, and science and technology. (Government of Malawi, 2002, p. xi)

Although education has its major focus in the second pillar, yet education underlies the ability to accomplish all of these four pillars. Only educated Malawians will be in a position to carry through the transformations required to lift Malawi from the desperate plight in which she now finds herself.

It is my strong belief that mathematics education is one of the many critical elements in poverty reduction. In this context and that of further national development, those who are mathematically capable will have a large role to play. Mathematical knowledge and skills are

important for farming, shopkeeping, business, technology, environment, health and so very many of the tasks that lie ahead. So the future development of Malawi can be linked directly to the success of its primary teachers in their teaching of mathematics. And how this can be changed is a matter for policy.

## **2.2 Primary schools in Malawi**

In order to understand the context of the practice of education in Malawian primary schools I have divided this section of the literature review into 14 sections. All schools are very much a part of the culture in which they are found, and the poverty, colonial history and attitudes about gender are part of the background that must be understood in order to explain what is happening, including the patterns of pupil dropout.

The impact of the 1994 decision to abolish school fees led to massive class sizes – at least in the early Standards, and language policies have important impacts on pupils' understanding. HIV/AIDS continues to impact on education, both through pupil dropout (e.g. orphans) and teacher deaths.

Finally there have been valuable descriptive studies of what happens in the schools themselves; teaching conditions and methods need to be seen in the context of the massive constraints on 'good practice', not the least of which is the established tradition of assessment and pupil ranking.

Although I read all of this – and much more about sub-Saharan Africa – before I visited Malawi, it failed to prepare me for the reality. It is probably impossible for an Australian to understand the world of a Malawian primary teacher without getting close to that context.

### **2.2.1 Indigenous education in Malawi**

Recent research confirms the belief that mankind first originated in Africa, and gradually spread from there to the rest of the globe (Wells, 2002, p. 40). Consequentially, the cultures that have developed in Africa have had millennia to refine their culture. Educating the younger generation serves to transmit that culture, comprising all that is needed to survive in what is frequently a harsh and difficult environment. 'The socialization of the individual to become a participating member of society was one successful area of African education which has much to teach us today.' (Furley & Watson, 1978, p. 3).

Although most children now spend some time in the formal Western schools run by the government, the much older indigenous education systems have not disappeared. Indeed they start before the young child begins Western education, in the home, and then run parallel to the more formal education system. One of the more visible highlights of the indigenous system is the initiation, taking place at puberty. This is still widely practised, at least in rural areas.

The key method of indigenous education was 'learning by doing'. With survival depending on 'the ability of one generation to pass on its skills and knowledge to the next' (Furley & Watson, 1978, p. 5) practical knowledge was considered important. Methods to acquire these skills included imitation of older members of the society, 'hands-on' tasks (including play substitutes), and most of all, work. Children are expected to work on some chores as soon as they can walk, and they quickly discover that the household depends on them just as it depends on the older members. Work is divided clearly between men's tasks and women's tasks.

As well as practical skills, the indigenous education system teaches wisdom. A major vehicle for this is the use of memorised stories, songs and proverbs. These encapsulate the essence of

belonging to the society, the importance and methods of relating to one another, and the taboos that prevent the closely-knit society from falling apart (Furley & Watson, 1978, p. 27).

Indigenous education continues to impart its practical survival skills, and its strong sense of belonging to a community, to the majority of the rural young. This continues in many communities to this day. But it suffered a cruel interruption for centuries after Europeans arrived, in the form of slavery, tribal wars and European exploitation.

Malawian indigenous education followed the pattern for African indigenous education described above. There were no schools, and all elements of education for survival were learned from the family or from the community, in non-formal institutions such as the initiation camps. In their discussion of education for democracy in Malawi, Kaunda and Kendall (2001, p. 9) find many virtues in the indigenous education system, in both content and method. There was also an intense period of education at puberty. This still continues for many youth. Alongside this historically proven education grew the very European education brought by the missionaries.

Indigenous education is in strong contrast to formal education run by the government. They aim to prepare pupils for futures with quite different values, one of traditional African society, the other aspiring to 'western' society.

#### *Some questions*

- What do the teachers and parents really want for the pupils in the schools?
- Is Malawian society torn between its African past and a westernised future?
- Are there African values that Malawians wish to maintain while aspiring to the wealth of the west?

These questions lead, in part, to the research variable [\*The purpose of primary education\*](#). Some implications are addressed in section [\*8.1.1: Poverty alleviation\*](#).

## **2.2.2 Formal education in Malawi**

### ***Historical development***

Missionary education started in Malawi in 1875 as 'an endeavour to supply the answer to Livingstone's appeal and prayer that Africa needed Christianity and commerce to stamp out evils of wars and slave trade.' (Banda, 1977, p. 48). There were several missions who competed for pupils, although, according to Banda (1977) 'intellectual development for the Africans was not one of the missionaries' main objectives.' Instead the objectives were evangelism, enough literacy to read the Bible, and 'to purify their way of life but keep them simple.' (Banda, 1977, p. 49). This set the pattern in which practical utilitarian skills (with simple literacy and numeracy) were coupled to simple Christianity, and formed the basis of limited education for a small number of pupils until after the first great war.

In 1926 a Department of Education was begun, starting a series of clashes with the missions, but due to shortage of funds, little government intervention took place. The policy of simple education for Africans continued and 'White privileges had to be safeguarded through an appropriate curriculum for Africans.' (Lamba, 1984, p. 157).

Conditions in a village school and the competence of teachers in the 1930s bear a striking resemblance to conditions 70 years later (Banda, 1977, p. 73). Another pattern observed in the 1940s rings true today as well – a demand to be taught English (Lamba, 1984, p. 161). The village schools ran for four years, and graduates were able to proceed to Central schools that ran from Standards 1 to 3 or 4. Central schools introduced English as a subject, but taught in the vernacular. The next level of school (the Station school) ran up to Standard 6, and subjects were taught in English. Graduates from these schools were able to become teachers or to enter the few secondary schools then open (Banda, 1977, p. 81).

More present-day themes are heard from the 1940s, such as the problem with pupil dropout. Banda (1977) describes the highly academic curriculum of the new secondary schools, leading in four years to a few pupils sitting the British 'O-level' examinations. Subjects included English literature and language, Chichewa and Latin. Such a curriculum rapidly led to the disappearance of any practical subjects and prevented any moves to establish technical schooling. It also had an overwhelming influence on the primary curriculum; this seems to be yet another pattern that is still with us (Banda, 1977, p. 90).

According to Lamba (1984), there were two major criticisms of education in 1951, leading to the Binns Commission from Britain.

... education was still insufficient, giving only too few children the chance of schooling with only a small percentage of the lucky few proceeding to an educational standard of real use to them and the country's development;

and (quoted from page 5 of the Binns Report by Lamba)

'education was effective in breaking up the old tribal life, but not in adapting its pupils to the conditions of the new.'  
(Lamba, 1984, p. 168)

In 1953 the British Government formed the Central African Federation, in which Nyasaland (as Malawi was still called) was linked to Northern and Southern Rhodesia (as Zimbabwe was then known). Lamba makes this evaluation of the colonial educational policy in the light of the needs of this federation for cheap Malawian manpower.

So long as migrant labour formed the crucial backbone in the economies of the other Federal partners, especially Southern Rhodesia, progressive African primary education in Malawi represented an undesirable contradiction. ... Colonial planners of course had different priorities other than real development of Malawi and Malawians.  
(Lamba, 1984, p. 173)

At the same time, the British Colonial Office had ideas of developing the secondary education system because of the need for low-level bureaucratic skills. It was also a cost-saving move for the Government.

Banda (1977) refers to *two major aims for education* that had become clear by the 1960s.

- The first required better secondary education and was aimed at meeting the 'staffing needs of Government, industry and commerce' (p. 95);
- The second emphasised more and better primary schools to give some form of practical mass education.

The country became independent in 1964, and the emphasis was shifted to the first of the aims: improving secondary and higher education to better involve Malawians in managing their own country. At independence about 360 000 children were being taught in many primary schools and a few secondary schools run by various religious institutions (Milner, 2001).

Here is another pattern that is still with us: in the 1960s, the selection examination determined what happened in primary schooling, totally undermining the 'mass education' aim.

The curriculum had changed very little since external examinations still controlled the whole system of education. ...

In the later years of the 1960s thought was given that so long as external examinations were part of the Malawi educational system, no real progress would be made towards realisation of the aims of education initiated after independence.

(Banda, 1977, p. 97)

The policy objectives of the first Education Development Plan (1973-80) 'base education development ... on the needs of the labour market of the economy', and chose 'to develop curriculum with greater relevance to socio-economic and environmental needs.' (Moyo, 1992, p. 273). Notes from 1983 include the observation that 'a high proportion of pupils dropped out of school due to lack of school fees.' (Moyo, 1992, p. 280). In the second such plan, (1985-95) the government tried to restore the balance of the two major aims by 'improving

equitable access to educational opportunities for all communities at primary level'. By 1990 the average pupil-teacher ratio was 69:1, which is roughly the same as in 2005.

In 1988 a curriculum review was begun, because of the selection emphasis that had not changed since the 1940s (Moyo, 1992, p. 294). The 1991 curriculum in mathematics presented a curriculum with *aims* clearly espousing *mass education*, and *content* that is clearly aimed at preparing pupils for *secondary schooling*, and the selection examination in particular. (For more detail, see section 2.3.3.) Thus the tension between two aims was not resolved.

In 1994 the newly elected democratic government kept an election promise to remove school fees at primary level, and there was a massive increase in enrolments, particularly at Standard 1. This has continued until the present (2005). The consequent overcrowding and lack of resources, including both classrooms and teachers, caused a rapid lowering of the quality of education that is still being overcome.

### ***Malawian primary education in 2005***

The present position echoes much from the past. Having a better education offers to a few pupils a way of reducing their poverty, and increasing their individual opportunity. The official Ministry of Education, Science and Technology (MoEST) position puts it this way:

The board policy of the Malawi Government is to alleviate poverty. Education is the centrepiece of this policy. Increased investment in education can yield broad economic and social benefits. ...

The Government further recognises that education is an important ingredient in the development and nurturing of an educated leaderships and effective governance. ... In this regard Vision 2020 – the Government's blue print for development – underlines the important role education should play in promoting a democratic culture, overall good governance and national unity....

Finally, ... Malawi joined other nations of the World in declaring education a basic human right and has accordingly enshrined this belief in the country's constitution.  
(MoEST, undated)

The structure of the Malawian education system currently involves eight years of primary education (Standards 1 to 8), followed by four years of secondary education (Forms 1 to 4). In fact the majority receive only a few years of primary education, and drop out. The reasons for these dropouts are complex. There are no programs in place to assist the 80% who do not complete primary education.

In 2000 the UN General Assembly set eight goals for nations to achieve in terms of human development. They are to be achieved by 2015. Goal 2 is 'Achieve universal primary education'. In sub-Saharan Africa 37 out of 44 countries (84%) are unlikely to achieve this goal by 2015. No-one is there yet. In 2000-2001 only 59% of eligible children were enrolled in school in sub-Saharan Africa (UNDP, 2002, p. 202). In Malawi only 49% reached Grade (Standard) 5.

Literacy is a useful measure of how much the education system has actually achieved. For youth (aged 15 to 24) in sub-Saharan Africa the literacy rate was 78% overall, with 72% in Malawi. The adult (15 years and over) population's literacy reflects the levels of education in past years: Sub-Saharan Africa 62%, and Malawi 61% (UNDP, 2003, p. 200). So Malawi is typical of many countries in Africa, where life is very different, in both quantity and quality, from life in the wealthy nations. Going one step further, the life of the poorest in sub-Saharan Africa bears little relationship to the life of even the poorest in wealthy nations. In the ladder of development, many nations are on the top steps, but many from sub-Saharan Africa have yet to start climbing.

The literacy rates for Malawi have been improving steadily over the years. In 1998 64% of the total adult population were literate in at least one language; this percentage was 75% for males and 54% for females. However literacy was 87% in the urban areas (92% for males and



81% for females), but dropped to 60% in rural areas (71% for males and 50% for females) (National Statistical Office, 2001).

This paragraph uses data from 1997. For those who made it to Standard 8, a selection examination took place that decided whether they were admitted into secondary education. The percentage of Standard 8 applicants who started secondary education varied but these were therefore a much smaller percentage of those who started in Standard 1. There were two examinations through secondary school, one midyear in Form 2 (the Junior Certificate of Examination: JSCE) and one midyear in Form 4 (the Malawi School Certificate of Examination: MSCE). These dominated all that took place at secondary schools (Chamdimba, 2002, Mwakapenda, 2000). By the time Form 4 is reached only a few of secondary entrants are left. Not all of these sat the exams, and only a fraction passed the MSCE. The successful ones were a tiny percentage of those who started. For most of these there were no jobs. The graph shows the 1977 data.

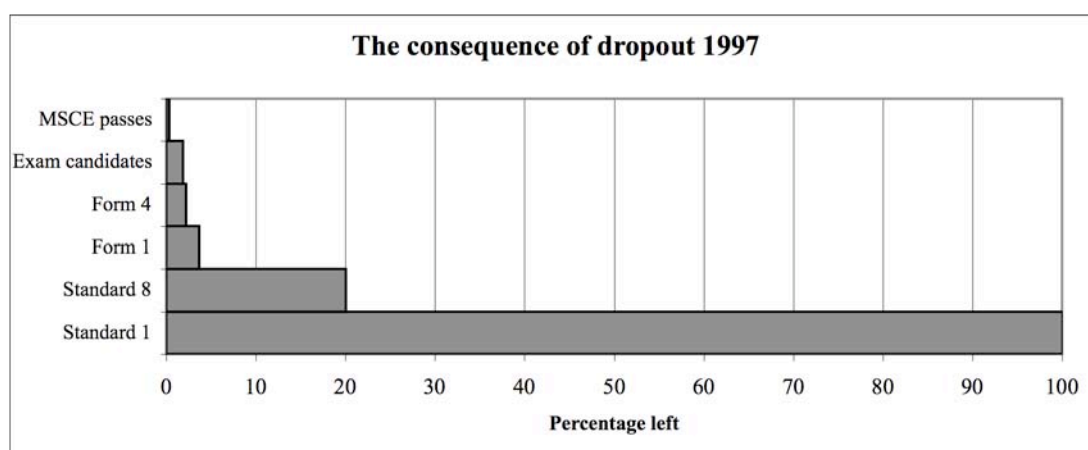


Fig  
2.1

In 2003, the official survival rates of Standard 1 pupils completing Standard 8 was 28.4%, but the rate for those graduating with an exam pass was only 18.6%. Using data available in 2004 (EMIS, 2004) 18% of the 1997 starters were in that Standard 8 class. In 2005, 36% of those who had studied Standard 8 the previous year were in Form 1 (EMIS, 2005). However, this implies that in 2003 only 6% of the Standard 1 starters were making it to Form 1.

As for secondary school, the most recent available data was for the 2000 Standard 8 class. Over half (55%) reached Form 1, 39% got to Form 4 in 2004, and 45% passed the secondary Certificate (MSCE); so 9.7% of the 2000 group passed the MSCE. Notice that the success rate at the examination had fallen from 2000 (55%) to 2005 (36%). This certainly relates to the fact that, compared to the 2000 class, many more students were involved in the primary cohort leading to the 2004 exam class. Of the 2004 class most would have started after Free Primary Education was decreed in 1995.

It will be clear from the description above that competition and selection examinations are the dominant features of the education scene. Whether or not it is an official goal, managing the intense competition of the selection process is clearly the major role of Malawian primary education.

Educational success is one of the criteria that ranks the members of society and determine the likely socio-economic future of the individual and her family. Education creates and perpetuates socio-economic divisions. To a very large extent, the opportunities for education open to the citizens depend on their relative wealth, so education also serves to perpetuate the divisions that presently exist.

The Malawian Zikani Kaunda co-wrote a paper (Kaunda & Kendall, 2001) about democracy in Malawi. It made several points about the clash between western ideas and traditional

Malawian culture. Firstly, ‘democracy’ was being misunderstood by large sections of the population, particularly the youth.

Interviewees ... most frequently defined democracy as freedom to do whatever a person wants, regardless of the consequences of their actions to others. ... Democracy has destroyed our cultural values, and is making it more difficult for us to manage the young ones.  
(p. 2)

Kaunda and Kendall suggest that the methods of non-formal education are better than the methods of formal school education.

In comparison to formal school settings, many non-formal educational settings in Malawi embody norms and practices more closely aligned with educating for a new model of democracy. They are engaged with many more people and often model culturally appropriate – and often more participatory – ways of learning. ...  
They use hands-on teaching and learning methods that often emphasize a give-and-take relationship between teachers and learners, and provide space for an explicit discussion of the norms and values that shape everyday life decisions.  
(p. 9)

They also refer to an historic tension between Malawian culture and formal education.

Formal schooling, especially in sections of the Southern and Central regions of Malawi, is still associated with norms and values considered contrary to local religious practices and traditions. The historical roots of the formal education system cannot be ignored in examining its ability to incorporate different ways of seeing and functioning into its structure.  
(p. 11)

For some of the likely implications of these roots of the formal education system, see the first parts of this section. The fundamental clash of goals: western vs traditional, has a long history.

#### *Some questions*

I have portrayed two seemingly incompatible aims for education in Malawi and shown how these developed historically, leading to the present situation existing from the 1940s.

- Are these two aims still competing, or has one become a clear winner?
- What is the actual purpose of education in 2005?
- Is there any difference between stated aims (in official policy documents) and the actual aims (as seen in practice)?

These questions lead, in part, to the research variable [\*The purpose of primary education\*](#). Some implications are addressed in section [8.1.1: Poverty alleviation](#).

### **2.2.3 Gender in education in Malawi**

Girls and women in Africa have traditionally not been educated well. Many of the reasons for this are categorised below. The categories cover socio-economic, social, cultural, school-based, and teacher-based reasons for the relative absence of girls from the upper levels of schools.

There are two aspects of girls’ education that need examination: the degree of access and participation compared to boys, and the quality of that education while they are at school. The access and participation can be studied through statistics, although they are often quite dated; these are explored below. The quality of education requires much more detailed examination and will be tackled in later sub-sections ([2.2.10 to 2.2.12](#)).

#### ***Access: gender ratios***

According to EMIS (2005) the percentage of females in education is 49.8%. This makes access almost equal. However, we will see dropout rates make the ratio strikingly different at higher levels: in Standard 1 the ratio girls to boys was 1.02, but the Standard 8 ratio was 0.78.

### ***Completion rates for primary education***

Malawi's percentages of completion of primary education are very poor: 27% of boys complete eight years of primary education, and only 20% of girls (EMIS, 2004). This gender imbalance is a general phenomenon. It is estimated that by 2005, there will be 91 million women in sub-Saharan Africa who are illiterate, and this will be over 62% of the illiterate people in the region (Hoffman-Barthes et al, 1999, p. 9).

### ***Survival rate to Grade 5***

Grade 5 education is considered enough to achieve basic literacy. Of those who enrol in Grade 1, by 2004 only 47% were left in the system (EMIS, 2004). The girl to boy ratio was still 0.49 in 2005; it is after Standard 5 that the girls drop out more rapidly.

The participation of girls has been of concern for many years. When free primary education was introduced in 1994 the classes became very crowded, but girls were the first to drop out. For many families even 'free' education is expensive in terms of uniforms and materials. They also lose the support of the child to perform important chores and care for sick family members. The pressure to absent a girl from school is far greater than for boys, whose long-term education is more valued.

Because of the US-funded GABLE projects (Girls' Attainment in Basic Literacy and Education) the government was able to waive fees for primary-school girls, and provide girls-only scholarships to secondary schools. GABLE has engaged in publicity campaigns to promote the importance of girls' education (Wolf, 1995).

Another international program that has targeted girl's education in mathematics and science, and had a significant impact on primary schools is FEMSA (Female Education in Mathematics and Science in Africa). This program has worked in specific schools to make an impact, and also engaged in publicity campaigns to increase awareness of the importance of girls' education.

Some of the challenges to the girls are poverty, attitudes of teachers, parents, boys and the girls themselves, insensitive teaching methods, and poor facilities. Malawi joined the FEMSA project in the interventionist second phase that started in October 1998 to tackle these problems at the grassroots level.

(FEMSA, 2003)

### ***Enrolment, repetition and dropout***

The rates of repetition showed a distinct pattern, with more boys repeating in Standards 1 to 4 and 8, and more girls repeating in Standards 5, 6 and 7.

Repetition rates by sex and Standard in 2000 and 2005.

Standard	1	2	3	4	5	6	7	8
Girls 2000	18.7%	16.2%	16.1%	13.7%	12.6%	11.6%	10.2%	13.3%
Girls 2005	23.8%	21.2%	20.8%	16.1%	14.8%	12.1%	10.7%	13.7%
Boys 2000	19.6%	17.0%	17.1%	14.1%	11.0%	11.1%	10.0%	14.4%
Boys 2005	25.7%	20.5%	22.7%	17.0%	15.4%	12.5%	10.2%	14.8%

Table  
2.2

Source: EMIS 2000 and 2005

A similar pattern obtained for the drop-out rates, in which the boys dropped out at a greater rate in Standards 1 to 3 and the girls at a greater rate from Standards 5 to 8.

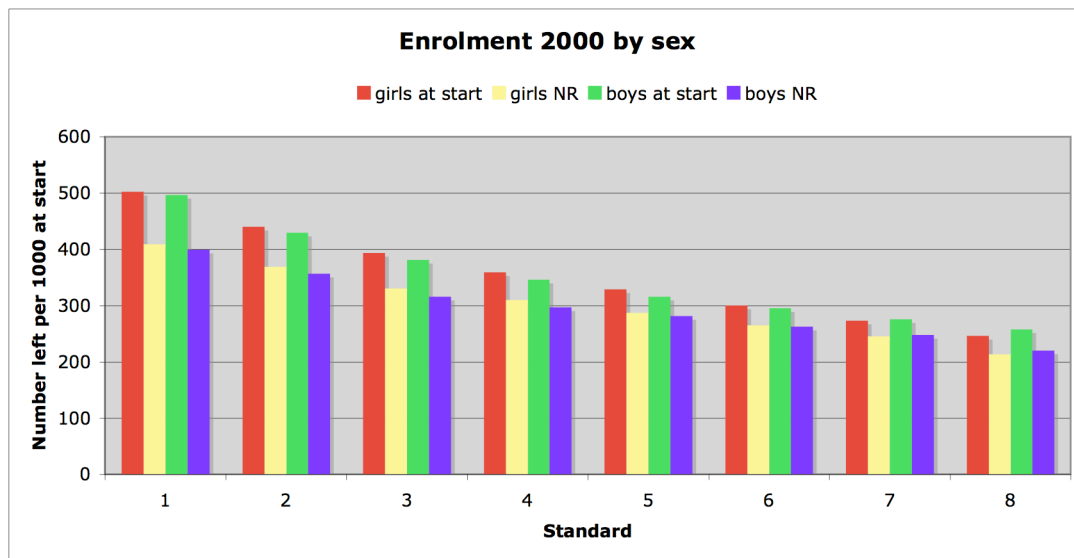
Drop-out rates by sex and Standard in 2000 and 2005.

Standard	1	2	3	4	5	6	7	8
Girls 2000	12.4%	10.6%	8.7%	8.6%	8.6%	9.0%	9.8%	10.5%
Girls 2005	25.0%	7.1%	16.5%	13.3%	17.6%	17.4%	20.9%	27.2%
Boys 2000	13.5%	11.3%	9.3%	8.6%	6.4%	6.9%	6.5%	6.3%
Boys 2005	21.3%	7.7%	14.8%	13.1%	16.2%	14.0%	12.8%	15.5%

Table  
2.3

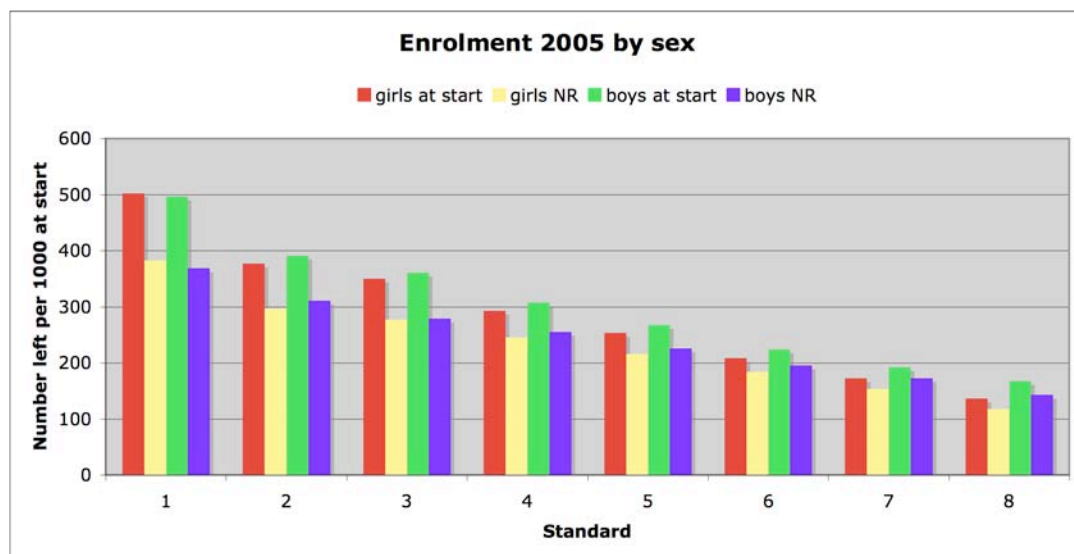
Source: EMIS 2000 and 2005

When these are put together, using the assumption that the same rates will apply over the next eight years, we get this picture of the enrolment. NR means non-repeating, so that the shorter columns show the numbers of children who pass each year and return to study. The graphs assume a nominal total 1000 enrolled at the start of Standard 1. Here is the simulation using the 2000 figures.

Fig  
2.2

Using data from 2000, the girls started with a slight advantage that disappears at the start of Standard 7 and by the end of Standard 8 there are 48% of the original boys remaining, but only 44% of the original girls.

Here is the comparison using 2005 figures. Dropout is getting dramatically worse.

Fig  
2.3

Using data from 2005, the girls started with the same slight advantage that now disappears at the start of Standard 2 and by the end of Standard 8 there are 28% of the original boys remaining, but only 20% of the original girls. The comparison between the two sets of data is dramatic. The dropout rate for girls at Standard 1 has had a dramatic effect on all the remaining data. Almost all drop out and repetition rates have increased dramatically. The consequence is a far less efficient education system.

### ***Performances at Standard 8***

The performances of girls and boys in the Standard 8 Mathematics examination for 2000 give some indication of the success rates. Note that in 2000, 48.3% of the Standard 8 students were girls. However only 39% of those presenting for the Standard 8 mathematics exam were girls in the same year. The results are indicated in the graphs below, with A being the top level and E a failing grade.

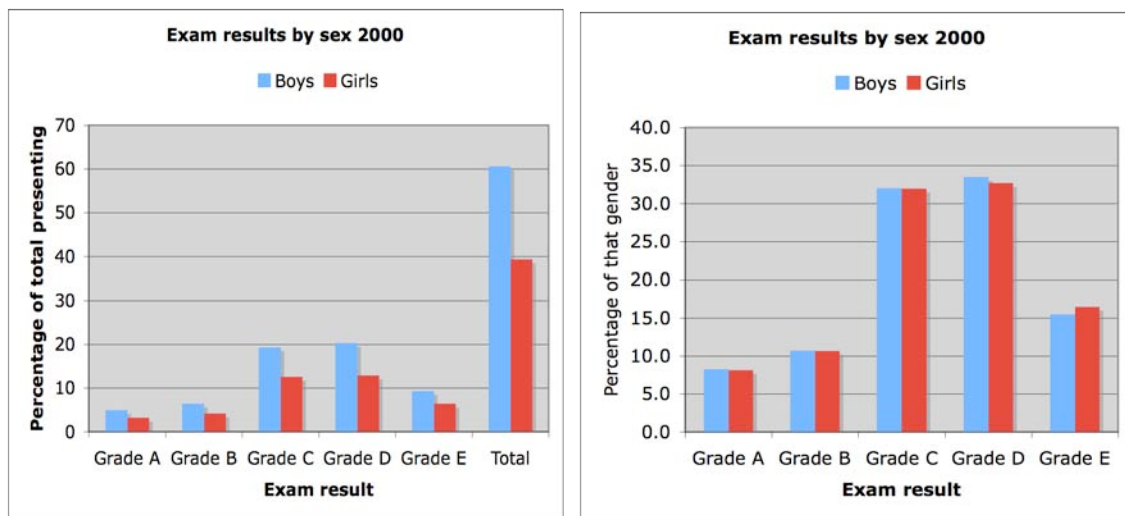


Fig  
2.4  
&  
2.5

Source: Malawi National Examination Board, 2001, quoted in FEMSA Malawi, 2001

The graphs show that only 40% of those who presented for mathematics were girls, and that this was reflected in the exam results evenly at all levels. However the graph on the right shows the equal percentages of each sex with each Grade in the results; it shows that the girls who actually present for the examination are just as 'clever' as the boys.

So Malawi had a situation where slightly more girls tend to enrol in Grade 1, higher percentages drop out along the way and even smaller percentages remain to complete primary education.

#### ***Some questions***

- What are the causes, both outside schools and at school, creating this disparity in educational access and participation?
- Why are girls dropping out at higher rates than boys, particularly in Standards 5 to 8?

These questions lead, in part, to the research variable [Gender](#). Some implications are addressed in section [8.1.2: Social equity](#).

### **2.2.4 Structured gender disadvantage**

Joy Wolf (1995) describes the background of the education system in Malawi in gender terms. She characterizes the missionary enterprise saying 'education was considered unnecessary for women', and goes on to say 'The colonial government did little to change this attitude. Rather it deliberately ignored women's education for both economic reasons and because it was felt that women's education would destabilize the traditional society.' (Wolf, 1995, p. 1). The strongly conservative values imposed on the society by the first President,

Banda, did nothing to change this attitude. The first Education Development Plan in the 1970s thought of equity only in geographical terms, and ignored gender. However it was widely felt, at least by outsiders, that there was a substantial gender problem; 'More studies of gender inequities exist for Malawi than for most sub-Saharan African countries' (Wolf, 1995, p. 3).

In 2000 the Malawian Centre for Educational Research and Training (CERT) published a substantial study, at the request of UNICEF, about gender issues in education (Chimombo et al, 2000). The summary below describes the factors that they regarded as most significant.

- Many girls start their education (at Standard 1) very late. They found many boys and girls starting after puberty, at age 13 or 14. This was significant in view of the tradition of initiation and early marriages for girls (p. 41). It is also related to the issue of school-girl pregnancy described later in this section.
- 'Early marriages still remain the main constraint to girls' education.' (p. 171).
- Once they have participated in initiation, 'the behaviour of girls in the classroom completely changes' (p. 87). They suggest that mixed gender classrooms are not appropriate at that stage.
- Outdoor classes discourage girls in particular, especially in poor weather.
- Schools are often located too far from the village, and girls feel insecure about walking.
- 'Boys are aggressive. They bully and sexually harass girls and these seem to make the school a very hostile place for girls' (p. 174).
- 'There is limited teacher – pupil interaction, and limited pupil participation in most lessons especially by girls.' (p. 174).
- Teachers think boys are more intelligent than girls.
- Families regard the education of a boy as being more cost-beneficial than the education of a girl.
- 'It is the girls who are more prone to working in the homes, and this greatly affects their performance in school' (p. 94).
- 'As parents, especially mothers struggle for survival in the homes, their daughters become substitutes for the remaining pieces of work in the household. The lack of persistence of girls in school is largely explained by the labour distribution patterns in the families as they strive for survival.' (p. 96).

For convenience I have split these matters into those largely outside the school domain and those largely within it. However there is a lot of overlap.

### ***Issues outside schools***

According to Ngwira and Ngwira (2000, p. 10) the 'main cultural issues that affect the access of children to basic education are marriage and inheritance customs, gender division of labour and initiation rites'.

The traditional values of society are stacked against girls and women. There are socio-cultural constraints on girls, related to the expectation of early marriage. This sometimes means that completing primary school is less important to the family and the girl than marriage. (The puberty initiation ceremony may reinforce this view.) Girls who fall pregnant before completing primary school may also be required to leave, either by the system, or due to their added responsibilities of child care. Early marriages are common, often while the girls are still in primary school. This occurs because many children will start their primary education several years later than expected, and with repetition of one or more years, it is possible for Standard 8 pupils to be well over 15 years of age. In 2005, 42% of Standard 8 girls were 15 or older.

Another important cultural practice affecting education is the pubescent initiation rites. This has the effect of making schooling seem somewhat 'childish' and irrelevant to the more 'adult' sexual matters to which they were introduced in the rites. It has the effect of reducing the likelihood of finishing primary school, particularly for girls (Ngwira and Ngwira, 2000, p. 12).

A further cultural issue which impacts on education is the division of labour by gender. Girls are expected to do more chores about the house, and morning tasks such as searching for water and firewood can mean that girls are often much more tired than boys at the start of a school day. If there is illness, or other chores that will take more time, it is the girls who give up days at school to meet family obligations. Once the refuge of many families in trouble, the safety net of the extended family is breaking up due to difficult economic strains, and many nuclear families now have complete charge of their own affairs (Ngwira and Ngwira, 2000, p. 13). For poorer rural families this role may be very burdensome. In cases where one parent has died, the added responsibilities as carers will fall onto the girls.

The opportunity to obtain an education is a cost a poor family may not be able to bear, and often leads to girls leaving school; see section 2.2.6. If they do achieve a reasonable education they are less likely to obtain a well-paying job (Mbilinyi, 2003; Hyde and Miske, 2001; Miske and VanBelle-Prouty, 1997; Logan and Beoku-Betts, 1996; Hulton and Furlong, 2001; Harris and Schubert, 2001; Mulemwa, 1999).

### ***Issues within schools***

Girls tend to receive less education than boys because they tend to drop out of school earlier. The direct costs of education (books, uniform, transport) mean that some children in a large family may miss out, or drop out early. Girls are most likely to bear this burden.

For girls who do try to attend school as much as possible after puberty, the lack of safety and security on the way to and from school (especially if the distance is great) and a lack of private facilities (such as enclosed toilets) will deter them.

To many girls, the curriculum – content, teaching methods and competitive assessment – may seem irrelevant to their likely futures, and due to the many other stresses on them, they may decide to quit school. Even in school the majority of cleaning and maintenance chores are given regularly to girls, but only to the boys as punishments.

Teachers in primary schools are predominantly male; 63% in 2005. This leads to sexual harassment of vulnerable girls and the boys frequently join in. It certainly discourages many girls, and their mothers may choose to withdraw them rather than risk an unwanted and 'shameful' pregnancy.

The language of many textbooks in mathematics is concise and severe. This makes understanding difficult in any language, but particularly so when the text is in a second or even a foreign language for the child. Along with harsh, memory-oriented teaching methods, with little stress on meaning, there appears to be a culture of actively discouraging girls.

The gender gap in performance is even greater in mathematics and science subjects than other parts of the curriculum. Frequent absences will lead to difficulties in any subject, such as mathematics, that depends on a gradual increase in complexity of the techniques to be mastered. The extremely great range of levels in any one large class – and the teacher's tendency to teach to the middle level of the class only – is sure to disadvantage those who for whatever reason drop below that 'middle level' (Prouty and Sey, 1997, Hulton and Furlong, 2001, Leach and Machakanja, 2000, Hyde and Miske, 2001, O'Gara et al, 1999, Wamahiu, 1996). Girls tend to be those most likely to drop out.



### ***Attitudes of teachers***

‘Female Education in Mathematics and Science in Africa’ (FEMSA) is a project initiated by FAWE (Forum for African Women Educationists). O’Connor (2001), coordinator of the FEMSA project, writes that

There is a strong, all-pervading traditional conservative belief among parents, teachers and students that mathematics and science subjects are a male preserve. The attitudes of teachers has by far the greatest impact.’ (p. 6).

For example, girls still do poorly in science, technical and vocational education (STVE) in comparison to boys, although this is rapidly changing in developed countries, it is still strongly entrenched in the developing world, such as Africa (Mulemwa, 1999a, p. 2).

Mulemwa notes (p. 28) that ‘Research findings ... have revealed that male and female learners are treated differently by the teachers, irrespective of whether the teacher is male or female.’ The teachers are perpetuating through their teaching the attitudes they have absorbed from the rest of society. FEMSA (2000) records that

In all schools, especially at the primary level, the amount of homework given to pupils has reached a disastrous level. ... Girls with large amounts of house chores to perform are the major victims of the homework madness.’  
(p. 6).

### ***Styles of teaching and assessment***

O’Connor (2001, p. 6) refers to the classroom dynamics in which teachers actively encourage boys in science and mathematics but discourage the girls.

Mulemwa (1999, p. 6) refers to the written text and their illustrations portraying women in passive roles as carers of people while the men are in active roles, engaged with technology. She shows that the style of assessment (facts and short answers only) common in final examinations tends to discourage teachers from engaging in styles of teaching that would increase enjoyment and understanding, particularly in mathematics and science. She recommends changing to some form of continuous assessment which enables the teacher to more adequately monitor the growth of understanding of each child and adjust the learning experiences to their real needs (p. 10). We will meet this style of assessment again as it is being introduced in Malawi. (See section 2.2.14.)

In Mulemwa’s report (1999, p. 4) the section headed ‘The gist of the problem’ refers to ‘inappropriate and irrelevant content’ due to adoption ‘around the 1960’s from the developed countries with little or no modification at all.’ She notes that examinations relying on memorising of facts disadvantage girls whose load of extra chores give them no time for cramming. She suggests a move to questions ‘that require demonstration of understanding, application and the higher reasoning type of question.’ (p. 8).

#### ***Some questions***

- Does official policy attempt to redress the gender imbalance described above?
- And if it does, to what extent does such policy make any difference to practice?
- Are the teachers aware of the ‘structured gender disadvantage’ experienced by girls?
- And if they are, what are they doing about it?

These questions lead, in part, to the research variable [Gender](#). Some implications are addressed in section [8.1.2: Social equity](#).

## **2.2.5 Gender interventions in African primary education**

In all categories there are initiatives in place that are making changes to this situation, at least somewhere in Africa; these examples point the way to a brighter future, both for the girls and



the women they will become, and for the nations who choose to develop this valuable human resource.

In 1991, USAID began to support the education of girls, in particular, through the GABLE program (Girls Attainment in Basic Literacy and Education). The arguments used were that greater education reduces the birth rate (Government of Malawi, 1992, quoted in Wolf, 1995). The data was provided, but it should be noted however that a 'clear relationship' does not establish that education of women causes fewer children to be born to the better educated. It may be that having children reduces the opportunities for education (a pregnant girl must leave school), making the cause work in reverse, or maybe other factors are drivers of the change in both these variables.

The GABLE project focussed on three areas: achievement (gender-appropriate curriculum and learning materials), retention (trying to change attitudes of the community about the importance of girls' education), and access (fee waivers for non-repeating girls) (Wolf, 1995 p. 4).

The first two are continuing efforts, and must remain in the forefront of efforts for many years yet. The third (fee waivers for girls) was dramatically undermined when, in 1995, the newly elected government campaigned on fee waivers for everyone. The public had not really understood why girls should get priority over boys, and removal of fees for all pupils was therefore a popular move. It led to the concept of 'Free Primary Education' (FPE) that dramatically increased the numbers in schools, and also dramatically lowered the quality of that education.

Many articles have reported that Malawi had a policy whereby a pregnant girl and the boy responsible were to be removed from school, permanently. However Wolf (1995) reports that such a policy had never been written down or proclaimed – it was just an accepted common practice (p. 7). With international support a new 'pregnancy policy' was eventually put into place, although not without tacit resistance from the bureaucracy. The new policy allowed the mother to return to school if the baby could be adequately cared for.

The distribution of this policy was resisted by school principals and by teachers. The 'new' policy floundered due to a lack of community support, and lack of clear guidelines for both dissemination and implementation. According to Chawanje-Mughogho & Chamdimba (2005, p. 11), the resistance has become bureaucratic as well.

Mulawa-Banda (2003, p. 18) reports that teachers are unwilling to have a mother return to school, and the new mothers themselves prefer to go to another school 'because of the stigma and sometimes a hostile environment to girl mothers re-admitted to their previous schools'.

Abuse of girls is not limited to male pupils; male teachers are often guilty. Moleni (2004, p. 17) describes the 'Code of Conduct' for teachers in which teachers are explicitly forbidden to indulge in this kind of behaviour; the consequence is loss of employment. However in the past a teacher – a valuable commodity in short supply – once proved guilty has only been transferred to another school, where he may possibly continue this unsatisfactory behaviour. It is noted by Moleni that 'all head teachers are men and male teachers also take the major responsibilities in schools', so that 'female pupils may remain vulnerable to abuse and be without recourse to female counsellors or teachers'.

Swainson (2000) blames the male bias of the system for many of the continuing problems with gender, despite 'good policies'. She also questions the 'common assumption' that increasing the supply of primary education will 'eliminate gender gaps' (p. 62).

Malawi has a Ministry of Gender, Youth and Community Services that is 'mandated to spearhead the formulation, implementation, coordination, monitoring and evaluation of the gender policy.' (Malawi Gender Policy, 2000 - 2005). The documentation makes clear

statements about the importance of educating women. It makes clear statements about the disadvantages for women in Malawian society. For example:

In this regard, the gender policy shall complement the public education policy to address the tradition of socialisation of girls into subordination. This is the socialisation process within the family, community, schools and other public institutions.

The above efforts notwithstanding a lot more need to be done. These include changing societal attitudes towards the value of females and promoting their empowerment, improving the quality and relevance of education, increasing financial resources for education especially, scholarships to girls...

Despite this, under the heading of 'Gender specific objectives', the education section of the policy document is deliberately 'even-handed' with respect to gender. For example, the quote above continues '... and needy boys'. Wherever 'girls' appears, it is followed by 'and boys'. Indeed, because of this, there is nothing 'gender-specific' about the objectives at all. Section 5.1.4 of this same document refers to a 'gender responsive curriculum', but this does not make any attempt to suggest that there might be a bias in present practice needing correction.

Moser et al (2004) include in their gender audit a section on 'gender mainstreaming' in the Malawian Poverty Reduction Strategy Paper. They conclude that the root cause of the problem is

a 'dominant male patriarchal culture has shown itself to be highly *resistant* to change'. This determines social and gender power relations to the disadvantage of women, engenders culture and tradition that deny women control or capabilities due to gender-based discrimination and consequent poverty (Semu, Ngwira and Kamchedzera 2004). Such research, shows that root causes of discrimination against women, including prevailing gender inequalities in social practices in families and communities, are mirrored in all institutions that govern women's and men's lives at local and national, and are well known by government and civil society activists alike.

(Moser et al, 2004, p. 6)

Gender inequalities run very deep throughout traditional African society. The position of girls and women is one of structural disadvantage and on the whole education follows the pattern of the rest of society, reinforcing the male-domination by giving all the opportunities to the boys, and requiring those girls who stay at school to perform many tasks which help maintain the system to the advantage of the boys (O'Gara et al, 1999, p. xviii). Making certain changes in education can make a difference, but there must be other changes in society to create equal opportunity that will support those improvements in the education system. For example, if more girls were to stay through primary education and learn well enough to get to secondary school, and do equally well with the boys there, there will be no lasting advantage until women are allowed to work on equal terms with men, and not be relegated to household duties.

#### *Some questions*

- What is a 'good' policy about gender?
- Does a good policy need to be 'pro-female' in order to address present injustice?
- If, as Swainson (2000) says, the gender policies are 'good', why do they seem to fail?
- What are the problems with implementation in the classroom? For example, is there resistance from teachers to improving the position of girls relative to boys?

These questions lead, in part, to the research variable [Gender](#). Some implications are addressed in section [8.1.2 Social equity](#).

### **2.2.6 Dropping out of education in Malawi**

African children are victims of the conditions of the society in which they live. As a consequence of living in poverty, and seeing poverty, disease and death around them, children have to focus on mere survival, like the adults in their society. There is no cause for hope for the future. Health is a continual problem. Due to lack of quantity and variety in the diet, the

growth of many children is stunted, and they are susceptible to many diseases. If there is sickness or death in the family, children will be suffering, both physically and emotionally.

Education offers the only hope for escaping poverty, but the constraints of a life of poverty have many educational impacts. Many children start school later in life. For those who get to school, home offers no time and space for study, no access to books and things to read, no chance to practise the ‘foreign skills’ that school attempts to teach (Lefoka et al, 2003). The statistics below portray some of the consequences.

*Repetition of grade level* is common. In many countries, progression up the school levels is by no means automatic. Automatic promotion, common in many non-African schools, does not take place in Malawi. To be promoted, students have to reach a ‘pass standard average’ for their tests throughout the year. They are constantly tested to see if they are achieving, and possibly to try to motivate them. Test results are used to determine whether or not the child has a satisfactory level of ‘mastery’ and will be allowed to continue to the next level. Those who do not reach this level either drop out or return to repeat the grade. In 2005 the average percentage in classes who were repeating that Standard was 19.5% (calculated using data from EMIS, 2005). In addition there will be those who have repeated in previous years, so the range of ages in most grades is quite large. The age spread is increased by the fact that many children start rather late, or return after having dropped out for a year or two.

In 2005 the official data showed that repetition rates dropped from about 25% in Standard 1 down to about 10% in Standard 7, and then rose to 14% for Standard 8 (EMIS, 2005, p. 18). Boys were slightly more likely to repeat than girls, who are more likely to drop out.

More information about the effects of repetition is available from the ‘Improving Educational Quality’ study (IEQ/Malawi, 2003a). Students who repeat one or more years consistently under-perform compared to their non-repeating peers. The effect of repeating on academic success is remarkably stable: students who repeat take a further 12 months to catch up to where their classmates were in the first year, so they are really two years behind.

### ***Who drops outs and why?***

Because of the differences in mean age between 1999 and 2002, the IEQ/Malawi study was able to infer that ‘the older Standard 2 pupils (likely to be pupils who had repeated or started school late) in the February 1999 sample had dropped out of school or were no longer attending (IEQ/Malawi, 2003a, p. 4). They also found that the majority of the dropouts were girls, since the percentage of girls in the sample dropped from 50% to 39% in the same time interval.

In 2005 the official data showed that dropout rates fell from about 23% in Standard 1 down to 7% in Standard 2, and then rose to 21% for Standard 8 (EMIS, 2005, p. 20). Girls were more likely to drop out than boys, particularly at the upper levels.

For each Standard the **dropout rates at the end of 2005** are given below (EMIS, 2005). Values are rounded.

After Standard	1	2	3	4	5	6	7	8
Boys %	21	8	15	13	16	14	13	15
Girls %	25	7	17	13	18	17	21	27
Total %	23	7	16	13	17	16	17	21

Table  
2.4

Those who are not promoted either repeat or drop out. When comparing the scores on a common test of those still at school with those who had dropped out, IEQ learned that as a group those who dropped out scored *higher* than those who remained, but the differences were only statistically significant in mathematics (Jessee et al, 2003, p. 13-15).

The IEQ project found that girls and more able pupils drop out, and by far the most common reason was ‘lack of interest’ (IEQ/Malawi, 2003a, p. 13, 14). As the table below shows, only marriage came close as a reason for leaving school.

<b>Reasons for dropping out</b>	<b>Standard 2</b>	<b>Standard 3</b>	<b>Standard 4</b>
No interest in school	82%	68%	50%
Marriage	16%	26%	45%
Other reasons	2%	6%	5%

Table 2.5

The results above are supported by EMIS (2005) data. Again the major reason for dropping out, at least in the early levels, is *lack of interest*. Here is the more recent EMIS data. Teachers reported the reasons for pupils dropping out at different Standards (EMIS, 2005). These were principally of two types: lack of interest and family responsibilities. The percentages are of the total dropouts at each level.

<b>Standard</b>	<b>Reasons for dropping out</b>								<b>Total</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	
Lack of interest	62%	66%	54%	52%	48%	43%	38%	33%	<b>56%</b>
Family responsibilities	25%	21%	26%	25%	22%	21%	20%	17%	<b>23%</b>
Other	13%	13%	20%	23%	30%	36%	42%	50%	<b>31%</b>

Table 2.6

(EMIS, 2005 p. 27)

The ‘Other’ category includes pregnancy (from 4% in Standard 5 to 17% in Standard 8), marriage (from 4% in Standard 4 to 38% of girls and 15% of boys in Standard 8) and employment (from 2% in Standard 1 to 9% of boys and 2% of girls in Standard 8).

Hidden in the ‘no interest’ responses may well be more genuine responses, such as extreme poverty, to which pupils may not admit (or about which younger pupils may not be aware). In contrast to using teacher reporting, Rose (2002) interviewed many older dropouts themselves in 1998. Although poverty (and the cost of education) was not mentioned by the teachers in the study reported above, research by Rose (2002) in 1998 considers poverty to be well correlated to the rate of dropout. It is quite possible that pupils will feel ashamed to admit being unable to afford to continue at school, and that the reasons given to the teacher, such as lack of interest or family responsibilities, hide the true reason. Rose interviewed the dropouts themselves. Here are the results of the study by Rose (2002). The most common reasons given for leaving school were:

- Boys: cost of schooling (50%), lack of interest (16%), illness (9%), family reasons (8%)
- Girls: cost of schooling (33%), lack of interest (19%), puberty related (15%), illness (10%), family reasons (8%)

In this list marriage was not included at all, although it may have been under ‘family reasons’ or ‘puberty related’, but the most obvious factor is the ‘cost of schooling’, which did not occur in the IEQ list, possibly because the young children involved were not aware of this. She reports that the major item causing the additional expense is clothing and footwear, with stationery (exercise books and pens) coming second.

**1 The main reason given for leaving is cost.** (Source: Rose (2002), p. 206. Data from 1998.)

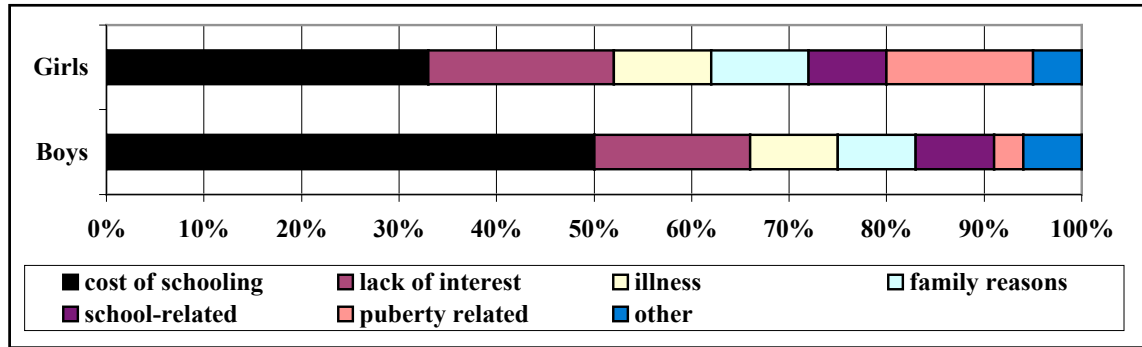


Fig 2.6

**2 The cost of education is mainly clothing.** (Source: Rose (2002), p. 170. Data from 1998)

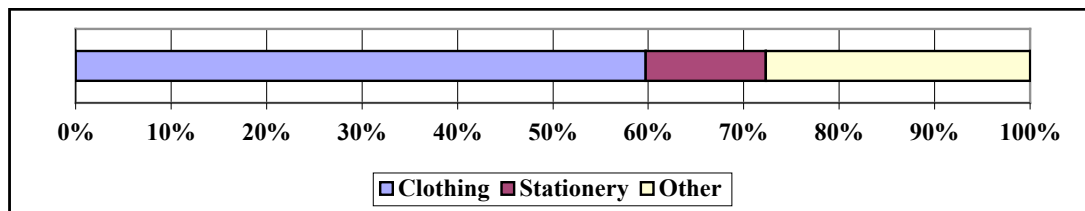


Fig 2.7

Rose (2002) reported that the costs are proportionally higher for rural (compared to urban), girls (compared to boys), Standards 5 to 8 (compared to earlier years), and for poorest families (compared to less poor).

**3 The costs are higher at upper levels, particularly for girls.** (Source: Rose (2002), p. 175. from 1998)

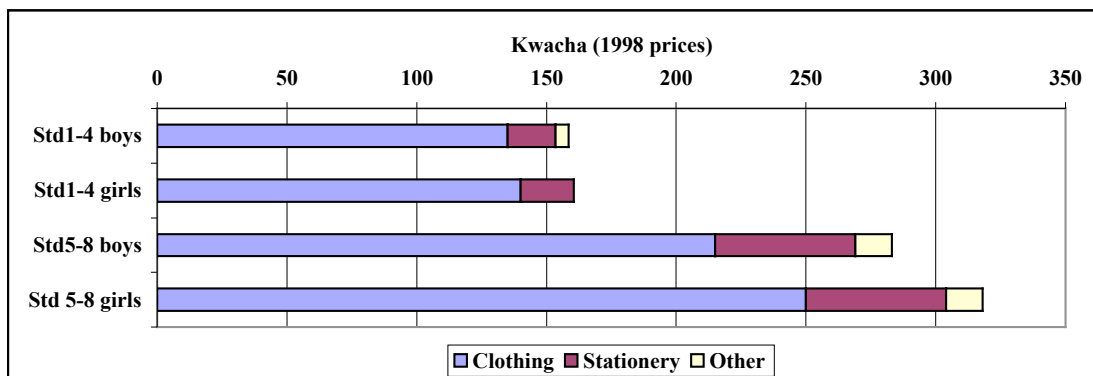


Fig 2.8

**4 Socio-economic status is related to schooling** (Source: Rose (2002), p. 178. Data from 1998)

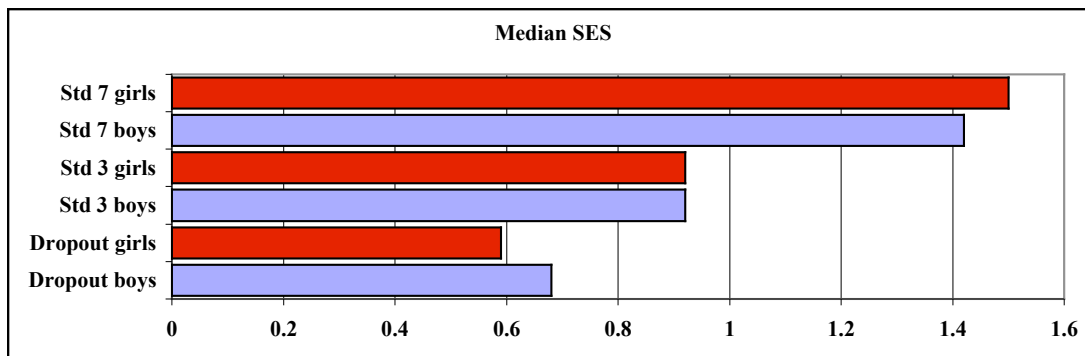


Fig 2.9

Rose (2002) examined the 'opportunity cost' of sending children to school, expressed in terms of 'hours of work forgone per day' while at school. She found this to be strongly age-related and, at least in rural areas, the opportunity cost for girls was higher for girls than boys. The consequence is that pupils (particularly rural girls) from poorer families are the ones who

drop out of school first. Rose also found a definite correlation between the socio-economic status of the families of three groups, the poorest being the dropouts, the next being Standard 3 pupils and the least poor being the Standard 8 pupils.

**5 The costs impact differently on levels of poverty** (Source: Rose (2002), p. 180. Data from 1998)

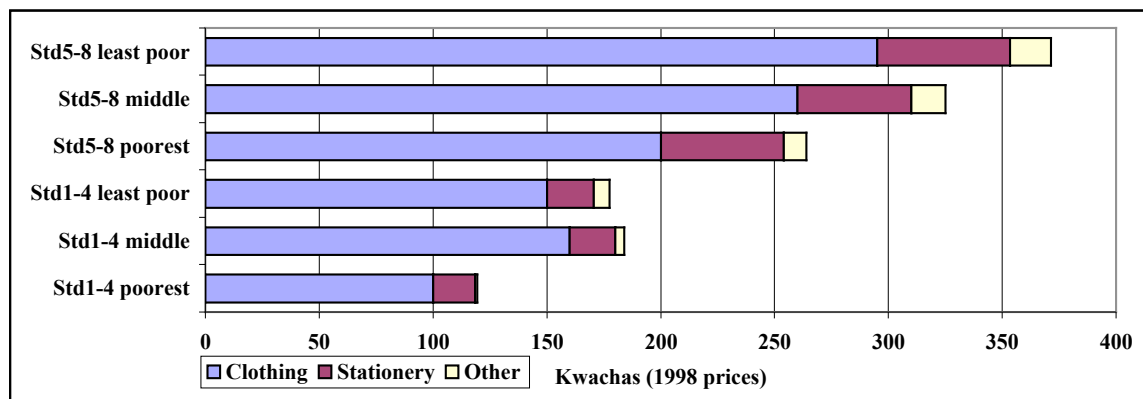


Fig 2.10

**6 Opportunity costs are related to location, age and sex.** (Source: Rose (2002), p. 215. Data from 1998)

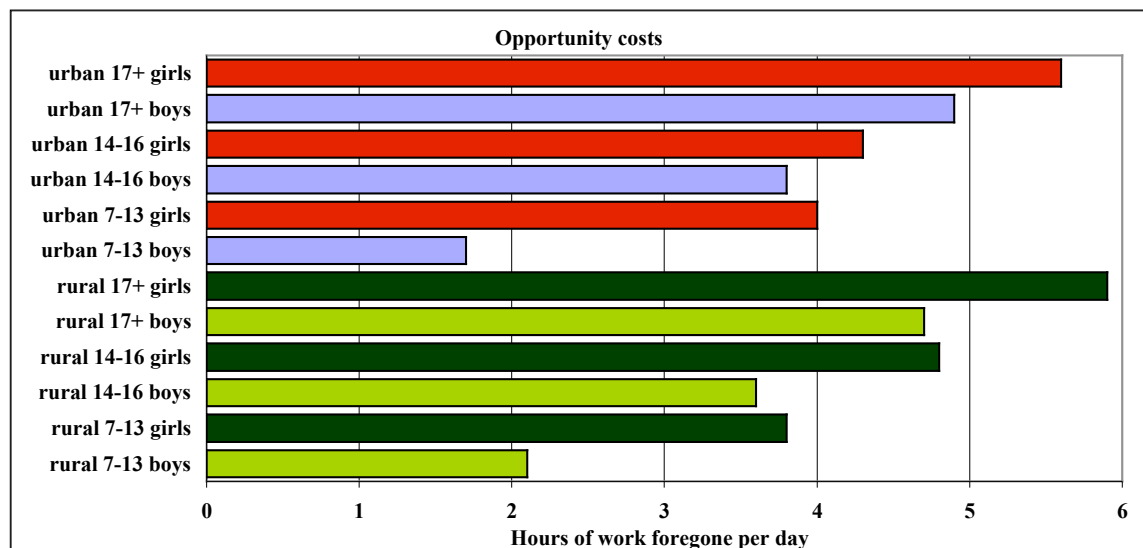


Fig 2.11

In summary, Rose (2002) found that the poorest children were the first to drop out of school, largely because of costs for adequate clothing. This particularly applied to girls at the upper levels. As a consequence of this, dropouts came from the poorest families, lower primary pupils were middle poor and those who survived to upper levels of primary were the least poor. Because pupils also performed work outside school hours, sometimes for money, there is a cost to the household (the 'opportunity cost') for the work lost to the household while the pupil is at school. This is always higher for girls than boys and is related to age, as the teenager takes on more responsibilities. When this cost is too much for the household to bear, the pupil leaves; this explains why poorest pupils leave first.

*Some questions*

- Given all this evidence, what are the official policies regarding the dropout rates?
- How are schools working towards lowering the rates at which pupils drop out?
- Given the massive classes at the lower Standards, how could teachers cope at higher Standards if they do manage to reduce the dropout rates?

These questions lead, in part, to the research variable *Meeting the needs of all*. Some implications are addressed in section [8.1.3: Quality of learning](#).

## 2.2.7 Large class sizes, age range and teacher deployment

### *Class size*

It is difficult to get data on class size in primary schools. The closest we can get with national level statistics is the student-teacher ratio, which is a kind of average. The national averages regarding education provision show a system struggling against overwhelming numbers. Data from the Ministry of Education (EMIS, 2005) showed that there were then 5103 schools and 43 952 teachers, of whom 88% had at least one year of teacher training. There were 3.2 million pupils, and so the pupil to teacher ratio was 72:1. In Standards 1 and 2 class sizes are well over 100 in Malawi. This drops back until they are relatively small in upper levels. The largest classes at the lower levels are normally held outdoors in the shade of a large tree, being so large that they cannot be contained in one classroom.

While 57% of pupils in rural areas had no permanent classroom, in urban areas it was 72%. This supports the contention that a high percentage of classes were taking place out of doors under trees.

### *Age range*

The problems faced by teachers are not only due to very large class size. The actual age range of the pupils in the class is very great, as is the range of achievement of those pupils. The following data and graph is extracted from the data provided by IEQ/Malawi (2003b).

**Age range in classes**

	<b>Percentages in each age range</b>				
<b>Standard</b>	Age 5-7	Age 8-10	Age 11-13	Age 14-16	Mean age
Std 2 boys	20	45	28	7	9.7
Std 2 girls	23	48	25	4	9.2
Std 3 boys	6	35	44	15	11.0
Std 3 girls	8	40	47	5	10.5
Std 4 boys	2	22	53	23	11.9
Std 4 girls	0	26	56	18	11.7

Table  
2.7

This sample was taken largely from Balaka, an area not too far from Zomba where I observed schools. The spread of ages appears to be roughly from 5 to 14 (across 10 years) in Standard 2 and from 8 to 16 (across 9 years) in Standard 4.

The tendency for pupils to start education later means that very young children and sexually mature adolescents are in the same classroom. The official age of admission to school in Standard 1 is 6, and at Standard 1, 6-year-olds are the largest group (37%). However as the years progress we can see the effect of repetition. By the time we reach Standard 4 there are many older pupils; 9-year olds are no longer the largest group.

Here is the data from EMIS, 2005. Note that 27% are in Standard 1, 73% of the pupils are in Standards 1 to 4, and 61% are age 10 or under.

	Standard								School total
Age	1	2	3	4	5	6	7	8	
4	1%								0%
5	7%								2%
6	37%	6%	1%						11%
7	24%	28%	4%	1%					12%
8	14%	23%	22%	5%	1%				12%
9	8%	16%	21%	20%	5%	1%			11%
10	5%	12%	19%	21%	20%	6%	1%		11%
11	2%	7%	13%	18%	20%	19%	6%	1%	10%
12	1%	4%	11%	16%	20%	22%	20%	6%	10%
13		2%	6%	10%	16%	21%	23%	19%	8%
14		1%	3%	6%	11%	16%	22%	25%	6%
15			1%	2%	5%	9%	14%	21%	3%
16				1%	2%	4%	8%	14%	2%
17					1%	2%	4%	8%	1%
18						1%	1%	4%	0%
Total	27%	18%	16%	12%	10%	7%	6%	5%	100%

Table 2.8

Here is the data in graphical form. Based on national EMIS data it shows the age distribution of a typical school in 2005. We can visually see the effect of drop out.

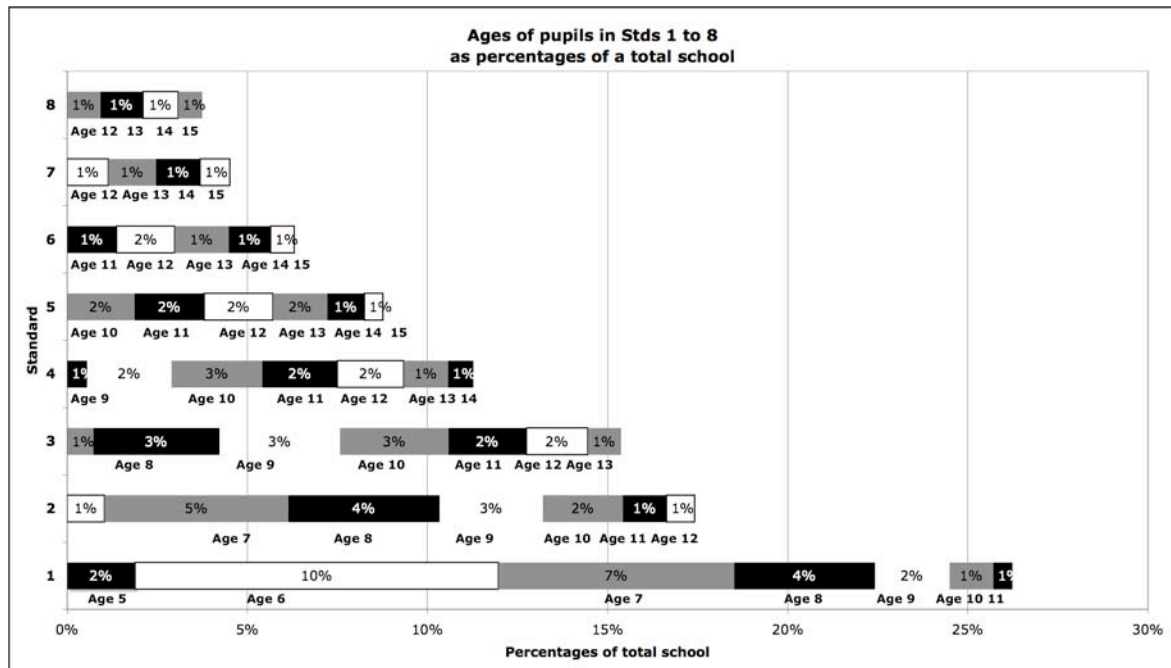


Fig 2.12

### Teacher deployment

The data above show that there were an average of 8.6 teachers per school. There are eight Standards in a typical school, so there should have been enough to go around. And yet there were substantial differences between the pupils per teacher in rural (75) and urban (46) schools.

The rest of this section suggests that teacher deployment is the major cause of this inequity. It is based on Mulkeen's (2005) report to the UNESCO seminar called 'Teachers for Rural



Schools: a challenge for Africa'. The data and comments below usually refer specifically to Malawi, one of the six countries investigated for this report.

Mulkeen (2005) suggests that there are many reasons why teachers prefer urban postings. These include better quality of life, greater health care particularly in the case of HIV/AIDS, better accommodation, better school facilities and resources. For women there are additional reasons: married women will not leave their husbands and family, unmarried women feel unsafe, and less likely to find a suitable husband. Some teachers prefer to remain unemployed (until a suitable urban posting comes up) rather than go to a rural area.

Once deployed, teachers 'are able to request transfers to other areas'.

For female teachers, transfer was often requested on the basis of marriage, and there even some reports of women faking a marriage in order to get a transfer. ... male teachers were sometimes able to get a transfer on the basis of going further study, and so needing access to electricity. Teacher illness is another major justification for movement. ...

In some cases teachers have been able to get a transfer, even when there is no vacancy in the school to which they are moving.

(Mulkeen, 2005, p. 8)

As a consequence 'there is an oversupply in the desirable areas, and a shortage in the less desirable areas'. This is supported strongly by the comparisons from the EMIS (2005, p. 5) data about primary schools.

**Distribution of teachers**

Percentage distributions	Rural	Urban
Pupils enrolled	91%	9%
Schools	95%	5%
Total teachers	86%	14%
Male teachers	96%	4%
Female teachers	68%	32%

Table  
2.9

Additional data shows that the percentages of female teachers in schools were dramatically different depending on location: in rural schools 30%, in urban schools 82%.

#### *Some questions*

- What is the teacher deployment situation in 2005 in my sample rural region near Zomba?
- Is there a difference between 'enrolment data' and actual attendance?
- Since these are only averages, what are the real class sizes at different levels?
- How does a teacher cope with a very large class of pupils?
- Does the effort of struggling to learn in a very large class size contribute to the dropout rate?

These questions lead, in part, to the research variable [\*Meeting the needs of all\*](#). Some implications are addressed in sections [8.1.3: Quality of learning](#) and [8.1.4: Recruiting teachers](#).

## 2.2.8 The impact of language in education

### *Sub-Saharan Africa*

For many students, home language is not the same as the official school language. So bilingualism becomes an aim. There are three general approaches to the issues of two or more languages in education. These are summarised by Diphofa (1997).

- an immersion or straight-for-target language model where the entire school curriculum is taught through the medium of the target language;
  - subtractive/transitional language-in-education model (where the learners' first language is either gradually or abruptly replaced by the target/dominant language);
  - additive bilingualism where a second language is acquired without any loss or weakening of the learners' first language, for example through dual medium programmes where half of the curriculum is taught in one language, the other half in another language, or when two languages are used interchangeably in each lesson, as needed.
- (Diphofa, 1997, p. 12)

In all sub-Saharan Africa countries there is a dominant language, usually the language of the colonial power that formerly ruled the country. This is dominant because it is the access to higher level education, to jobs, to money and to power. The subtractive method, which attempts to totally replace the child's home language (for the purposes of education) early in primary school is generally regarded as a failure. The additive method, where the child eventually becomes at least bilingual and can learn in at least two languages, is seen as the best way forward for African schools.

Holmarsdottir (2003) analysed the language situation in South Africa where the dominant language is English. However for most Bantu children English is a foreign language. This applies to children both in rural areas and in the Bantu townships; there is little or no use of English outside of school. So this is an example of the 'subtractive model'.

Despite all the research showing that children learn better in their mother tongue the use of ex-colonial languages as medium of instruction, particularly in Africa, still continues.  
(Holmarsdottir, 2003, p. 21)

Holmarsdottir observed many classes and was concerned to see how the pupils were coping with having to learn all their subjects in English, which was a foreign language to all of them. Because English was new to the students, the amount of English they were expected to use was minimal. This meant that the actual depth of learning of the subject material was quite minimal, a fact that is, naturally, reflected in examinations at a later date (Holmarsdottir, 2003, p. 22). In addition, many South African teachers still think of English as a foreign language. In order to achieve some level of understanding of the content for pupils they frequently code-switch, dropping local language phrases or even entire explanations into their English teaching.

Holmarsdottir's conclusion is a plea for more use of home language as the language of instruction. Any country that prides itself on its attempt to equalise educational opportunities is not achieving this if children are forced to learn in a foreign language.

The multilingualistic situation found in South Africa is not unlike those found in many other countries, particularly in Africa. This study has highlighted that in South Africa language decisions in education have had more to do with issues of political dominance, power struggles, the preservation of privilege and the distribution of economic resources and not with pedagogical concerns...

Similarly, education cannot possibly be equitable and non-discriminatory when the medium of instruction is in a language that neither the teachers nor the learners can use sufficiently and when the majority of the population is required to receive their education through a language of the dominant minority.  
(Holmarsdottir, 2003, p. 28)

This is a common situation in Sub-Saharan Africa, and creates a substantial dilemma for such education systems. It is further aggravated if the students' home language is not the official

language of instruction for at least the first few years. If this happens, then the pupils are forced to learn (i.e. rote memorise) everything in a language they do not understand, right from the start. No wonder so many drop out of school!

### *Malawi*

In Malawi, government language policies are very influential in determining the educational opportunities of certain groups. In 1968 the language of Chichewa was nominated as the national language and English was also chosen as the state language. Both of these were to be taught from Standard 1 in schools. In 1996 the Ministry of Education determined that the child's mother tongue was to be the language of instruction up to Standard 4, but that English was to be the language used to teach all classes (except Chichewa) from Standard 5 up (Chilora & Harris, 2003).

If your child is a native speaker of Chichewa, this seems a reasonable proposition. The child would learn in her home language in the lower years, and by the time four years of English have taken place, there might be enough of that language learned to study the rest in English. The policy might work, at least if the child's teacher speaks Chichewa (IEQ/Malawi, 2003b).

However, for the vast numbers of non-Chichewa speakers in Malawi, this policy creates problems. Many teachers appointed to non-Chichewa speaking schools cannot speak the local language, and have to do all their teaching in Chichewa. The child therefore does not learn in mother-tongue and this puts those children at a disadvantage. Those who do learn in their mother tongue have still to learn two new foreign languages (Chichewa and English) while trying to gain an education in other areas. And this takes place in the largest classes in the school, often over 100 pupils. So non-Chichewa speakers are still at a disadvantage. Further, despite the policy of mother-tongue teaching, no resources have yet been made available to schools in languages other than English and Chichewa. In the IEQ/Malawi study, it was the Chiyao speakers who were clearly disadvantaged (Chilora & Harris, 2003).

The IEQ study (2002 data) investigated the possibility that the teacher does not speak the home language of the pupils. About 52% of the sample of pupils in the study spoke Chiyao at home, and had no knowledge of the national language of Chichewa before coming to school. Of the teachers 62% spoke 'at least fair Chiyao'. The matching of teacher and pupil language was 79% for Chiyao speakers and 99% for Chichewa speakers. For Chiyao pupils that was a dramatic improvement from 1999, when the match was only 29%. This occurred largely due to improved teacher posting policy, and possibly the availability of more Chiyao-speaking teachers (IEQ/Malawi, 2003b, p. 25).

It is interesting that home language does not appear to make a difference to the ability of pupils to learn to read or write Chichewa. However in learning English Chiyao speakers seem to be systematically disadvantaged (IEQ/Malawi, 2003b, p. 66). The advantage of mother tongue instruction is particularly evident in mathematics, and the evidence for this will be presented in section 2.3.4.

Many adults consider the use of a child's mother tongue in learning to be inappropriate, as the use of English is part of the ladder out of poverty. Although the use of English from Standard 1 is the unsuccessful 'subtractive model' of second language instruction, many adults seem to value good English language skills above all else (IEQ/Malawi, 2003b, p. 20).

The pupil's gender has no significant impact on the learning of English and Chichewa, but does seem to relate to mathematics learning as girls under-perform the boys consistently through Standards 2, 3 and 4 (IEQ/Malawi, 2003b, p. 63-71).

### *Some questions*

- How well known is the present language policy and how seriously is it taken by teachers?

- If classes in the Zomba area contain a mix of native Chichewa and Chiyao speakers, what happens in these classrooms? Does what happens depend on the home language of the teacher? Does this appear to disadvantage either home-language group? Are the teachers aware of this?
- How does the lack of textbooks in Chiyao influence what happens in Chiyao-speaking classrooms?

These questions lead, in part, to the research variable [\*Language of instruction\*](#). Some implications are addressed in sections [8.1.3: Quality of learning](#).

## 2.2.9 The impact of AIDS

As a result of HIV/AIDS many children have lost one or more parents. When this occurs, they may need to be absent from school more often to take some added responsibility around the home. Such children are more likely to drop out of school. The effects on children and youth involve the possibility of infection through unprotected sex, causing more problems for girls than boys or men.

Malaney (2000, p. 3) suggests four major effects on children of the AIDS epidemic.

- Older siblings will be expected to take on more care-giving roles, and rates of absenteeism can be expected to rise as a result.
- Death of a parent will have deep psychological effects, and children will spend a long time in mourning, with consequent effects on their study. They are more likely to repeat a year.
- With the loss of a parent, the financial support base goes and children may have to leave school to find work.
- Extended families (including grandparents) may find themselves with very many children as parents die. They will not be able to afford to send all these children to school.

The HIV/AIDS pandemic has widespread impact on pupils. The IEQ study found these effects.

- They are surrounded by parental death and dying. Even children who come from healthy families are faced with the sadness and mourning of their peers who are dealing with parental death and dying.
- About 5% of pupils lose a parent each year.
- Pupils are frequently absent so they can care for sick relatives. For orphans this is much more common.
- Pupil absence included attending funerals; those without mothers are absent more often than those without fathers.
- Orphans are twice as likely to drop out than those with at least one parent alive.
- Those who have lost one parent are more likely to repeat a year, and the average age for orphans is about six months greater than other children.
- Surprisingly, the death of one or more parents has an insignificant effect on academic performance for those who continue at school.  
(IEQ/Malawi, 2003b, p. 73-74)

The young adult age group of most teachers puts them in the group most at risk. 'Estimates of HIV/AIDS teacher infection rates in Malawi range from 13-40%.' (IEQ/Malawi, 2003b, p. 76) Some of the effects on pupils will be described below. Because of the rate of teacher illness and death, large numbers of untrained teachers must be added to the system each year merely to keep the pupil to teacher ratio about the same (Harris & Schubert, 2001).

In Malawi, at least one teacher per day dies of this and if one considers who is affected within the circle of that teacher – loss of teaching personnel; loss of a mother; loss of a wife; the strain on the family and the school (pupils and teachers) while the teacher suffered and eventually died; long-term loss of a contributor to national development and so on.  
(IEQ/Malawi, 2003b, p. 73)

In 2005, about 2000 teacher deaths occurred from AIDS-related illnesses (Chirwa, 2005, private correspondence) – about the number of students in the teacher training colleges. Even though the number of children attending will fall due to parental AIDS deaths, the impact of one teacher's death will outweigh many children dropping out in terms of the pupil-teacher ratio. Malaney (2000, p. 3) suggests that teachers are a particularly high-risk sub-population.

The psychological effects of knowing they have contracted HIV can severely effect some teachers, lowering their performance. Malaney (2000, p. 8) found that many go into denial, and when they become ill, label their problem as cancer, or malaria, or tuberculosis, etc. It is the rural areas that may suffer the most, and to replace the rural teachers massive increases of newly trained teachers from these rural areas will be needed. One of the consequences of AIDS and teacher mobility is the lack of continuity in planning and teaching. Teachers report being alone and feeling unsupported (IEQ/Malawi, 2003b, p. 76-77).

#### *Some questions*

- What is being done to help children who have lost one or more parents due to AIDS?
- Is the rate of teacher replacement keeping up with the rate of teacher death?
- Is the school curriculum helping children deal with the pervasive effect of AIDS on community life?

These questions are not really within the scope of this study, but, in his role at the Malawi Institute of Education, Mr Grames Chirwa, the research assistant in this project, has been developing teaching materials for a new subject called Life Skills, aiming – at upper levels – to help children deal with sexuality and the fact of HIV/AIDS in the community. As I finish writing this thesis, he is researching the teaching of this subject for his own M. Ed. degree.

## **2.2.10 Teaching conditions in Malawian schools**

The IEQ/Malawi project identified teacher mobility as a substantial challenge for the education system. They found that about half of the teachers in classes in February were not in their classes in October in the same year. Of the total, 10% were transferred to other schools, 50% had moved to different classes in the same school, and the others were ill, on leave or dead. It is clearly difficult for systematic learning plans to be implemented if teachers cannot expect to stay with the same class all year (IEQ/Malawi, 2003a, p. 28).

In 1998 Milner et al looked at conditions at Standard 6 level. They found particularly poor performance in English, the language of instruction at that level. Why was this occurring? They believed that the factors are all due to the poverty of the country and hence the education system as a whole, and not the 'fault' of the pupils and their families.

There are several factors that may have contributed to this poor performance. These include overcrowded classrooms, a lack of textbooks and other materials, a lack of books to read (classroom and school libraries), absenteeism and dropping out of school and then rejoining later, as well as poor teaching.

(Milner et al, 2001, p. 60)

So – primary school is taught by teachers in overcrowded classrooms in poor conditions, lacking in basic furniture, paper, pencils, blackboards and so on. Of particular importance are the effects of large classes, often so large that they must be held outdoors, the frequent shortage of textbooks, and the impact of pupil learning in a language that is either a second language or a foreign one.

According to EMIS, in 2005 there were 37 792 classrooms of which 30 080 were permanent. The pupil to classroom ratio was 85 to 1, but for permanent classrooms it was 106 to 1, and about 10% of those were 'incomplete'. The pupil to teacher ratio was 71 to 1, but for qualified teachers it was 83 to 1. Despite this, there are still only about 8.6 teachers per school; because

of the rural/urban imbalances many schools are clearly were short of anyone to teach the children.

The 64 schools in the IEQ/Malawi study had an average of 766 pupils, and 9.5 teachers per school, resulting in a teacher-pupil ratio of 80:1. This varied enormously, so that, for example Standard 3 classes had a range of 41 to 119 pupils and a mean of 66. In fact poor attendance (about 70%) reduced the actual numbers on any one day, but made continuity of the educational process almost impossible to achieve (IEQ/Malawi, 2003b, p. 16).

Teachers were aged 30 on average and 70% were male. They had completed 12 years of schooling and been teaching for 5.5 years. They were all excellent speakers of both Chichewa and English. For their school qualifications only 25% had passed MSCE (end of secondary education). There were 70% with teacher qualifications, but these were equally shared by MIITEP (see section 2.4) and the two-year course – see above. Despite this lack of personal education and lack of in-depth teacher education, these teachers were performing day-by-day in conditions that would make most Western country teachers despair (Jessee et al, 2003, p. 24, IEQ/Malawi, 2003b, p. 14).

### *Textbooks and guides*

As well as providing the syllabus for each subject, the Ministry provides each teacher with a subject guide, containing detailed suggestions for how to teach different parts of the courses. IEQ reported that ‘By 2002, 43% of the teachers did not have math guides.’ This lack of guides was not so acute in Chichewa or English (18% and 7%) but compounded with overcrowding and lack of training, presents a lack of printed support that should be readily easily overcome (Jessee et al, 2003, p. 21).

Textbooks and guides for teachers are generally provided, although Milner et al (2001) has referred to a lack of textbooks in some schools. Subject textbooks are written in the Chichewan language up to Standard 4, and in English from Standard 5 to 8, except for the subject of Chichewa. Nearly all teachers use textbooks in class time, but there are never enough to go round. Sharing of books is common, but 75% of pupils take books home to study. There is some doubt about how much of the texts the children can actually read with understanding (IEQ/Malawi, 2003b, p. 53). Either the books are too difficult for the pupils or the teacher or both. There is evidence that textbooks, designed for use after Grade 4, are generally unreadable by students at that stage due to their poor command of English (Milner et al, 2001, p. 60, 61).

The IEQ/Ghana project investigated the use of textbooks in schools (Okyere & Harris, 1997); there has been no similar study made in Malawi. The IEQ/Ghana report suggests that, once teachers find the textbook numbers less than the numbers of pupils they severely restrict the use of the books.

It was typical for teachers to say, “There are enough books, so each child has been assigned a book.” or “There are not sufficient of this book so I keep them locked in the cupboard.” (p. 4)

Some teachers bring out the books only when needed for a particular lesson. If distributed to particular pupils, they tend to go to the higher performers or the better readers. Regarding the standard of work and level of reading in the books

(t)here seems to be a double standard: one for what the teacher thinks children in a particular class level should be able to do (perhaps left from when education was more elitist) and another for what most children can actually do. The textbooks seem most aligned with teachers’ perceptions of what the children should be able to accomplish. For this reason, many teachers, particularly those in rural areas, spend extended instructional time on the first units, never reaching much of the text. (p. 9)

Any lack of use of textbooks might also be a factor of their style, level of difficulty and lack of ability to help slower learners or those with less reading skill.

They express a need for workbooks or more exercises associated with the text, more illustrations and other instructional aids to help teachers teach new vocabulary. A few teachers have obtained textbooks

from lower level classes for use by low performing pupils and one teacher commented that there should be a second text for each class for those who are still at a basic level. (p. 9)

So any problems arising from distribution and difficulty level will be most damaging in rural schools.

Moulton (1997b, p. 6) presents an overview of research to that date, and summarises the lessons from the Ghana study this way:

- Teachers used to communicating by writing on the chalkboard need explicit training in moving toward the use of books as the medium of reading and writing;
- Enough books must be available for students to use them individually, at least in language and math;
- Teachers need written materials to supplement the books—remedial materials for those whose skill level is too low and enrichment materials for those who master the material easily;
- Teachers also need training in how to conduct group work using books;
- Head teachers, parents, and students need guidance in managing textbooks. (Schools where head teachers set forth clear policies on book management fared better than those where guidance was vague); and
- Students and parents need to understand how to use books at home and how to take care of them.

The implication is that there must be enough books (one per pupil) and teachers have to learn how to use them well.

Other than texts and guides, no classroom resources were provided by the Ministry. Any resources must be hand-made, using available materials, of which there are very few. The IEQ program emphasised this aspect of teaching through their promotion of ‘TALULAR’, (‘Teaching And Learning Using Locally Available Resources’). ‘Creating such resources and using them well as part of their lessons’ is a most important teaching skill (Jessee et al, 2003, p. 26).

The strain on teachers appears largely in the make-up and size of the classes they have to teach. Standard 1 classes are often over 120, and the mean for Standard 2 was 96, meaning that many of those were also over 100. The range of ages in one class due to late starting or repetition can be quite staggering. For example, 20% of Standard 2 pupils were aged 5 to 7, but 7% were aged 14 or more. (The median was 9 and the mean was 9.7.) ‘This suggests that teachers face wide disparities in pupil development and interest further complicating their choice of instructional approaches’ (IEQ/Malawi, 2003b, p. 75).

#### *Some questions*

- How do conditions in my observed schools compare with the grim picture above?
- What are the class sizes, and how do they vary across levels?
- Are there enough textbooks and teacher’s guides, and how are they used?
- How well do pupils learn when taught in English in Standards 5 to 8?

These questions lead, in part, to the research variable [\*Teaching style\*](#). Some implications are addressed in sections [8.1.3: Quality of learning](#) and [8.1.5: Professional learning for mathematics teaching](#).

### **2.2.11 Teaching methods**

The IEQ/Malawi project had observers rating teacher’s methods of teaching in Standards 2 to 4. The aspects on which they reported were the use of pair work, group work, role play, song, demonstration, varied approaches, and integration of other subjects. The ratings of most teachers were close to zero in the first four areas, but only ‘weak’ in the use of demonstration and varied approaches. The aspect of teaching they found particularly weak was the use of local resources (IEQ/Malawi, 2003b, p. 52, 101). The aspects of teaching that IEQ/Malawi

found were the strongest were appropriate use of language, use of questioning techniques, subject knowledge and appropriate dress.

The IEQ study searched for correlations that might hint at possible links between teaching methods and learning. The level of teacher qualification had no statistical relationship to the rating of that teacher's performance in class. Indeed, what are normally considered 'effective practices' were related to greater learning gains in only half the cases for English, two-thirds of the cases in Mathematics, and less than a third in Chichewa (IEQ/Malawi, 2003b, p. 52-57, 101).

Between Standard 1 and the end of Standard 4, 50% of the starters have dropped out. So the formal numeracy experiences for the majority of pupils take place in these years. This learning takes place in their own home language, or – if their teacher does not speak that language – in the national language of Chichewa.

Malawi has an oral culture. This has profound implications for teaching and learning (Terry et al, 1996). Since the majority of the population have little or no literacy, they must belong entirely to the oral learning tradition. Of course, at one stage in history the entire world belonged to that tradition. But most readers have grown up in a literate tradition, and learned to learn in quite different ways.

By what means do oral communicators learn and remember? Terry et al (1996) refer to stories and symbols as the conveyors of meaning, referring to research showing far greater retention of information when stories were used as the teaching method. To illustrate the dramatic differences in methods, these authors describe in some detail the male and female initiation ceremonies of 'the people of the dance', the traditional Yao people of southern Malawi. The traditional teaching methods used in the *Jando* (male initiation) were memorisation of a poem, learning a song, use of role-play to 'dramatise the concepts found in the story/poem and song' and then using this information to teach another initiate, thus reinforcing the information and ideas in their own minds. 'Rhythm and beat, antiphony and group participation is heavily involved.' Terry et al (1996) refer to oral teaching methods as efficient for oral learners because the teaching style matches the children's learning preferences.

Oral methods are explored by Croft (2002a, b) in her observations of Standard 1 classes in southern Malawian schools. She describes a class of 107 meeting under a tree, and managed with the use of a number of songs.

One of the coping strategies employed by teachers to control the class is singing. Song can be used to motivate students at the start of a lesson, as a refocusing exercise when their attention wanders or as a diversion while teachers write on the blackboard. Only rarely are songs used in these Malawian schools to reinforce the content of a lesson. While teachers mostly use English language songs which are in the standard teacher's guide, they do so in ways which are not officially recommended. (Croft, 2002a)

The basic question she asks is: 'Are teachers who organise group singing in massively overcrowded classrooms just using a crowd control technique? Or are they demonstrating the need to recognise the validity of teaching styles adapted to local conditions?' She is clear that the songs are often not being used to reinforce learning concepts, and she was unable in her research to detect counting songs.

While reminding us that these teachers have few material resources, Croft (2002b) makes the point that the major resource is the teacher him/herself. This use of voice and songs for management, and antiphonal choral responses help children to memorise basic phrases in English language learning. In contrast to her observations are the IEQ observations, where the use of song was rated as almost non-existent. However it may be that the songs, used as Croft suggests largely for management, group cohesion and 'fun', were regarded as not helping the main learning of the lessons, and so down-graded or ignored.



Croft (2002b) provides considerable insight into the teaching methods used for Standard 1. Many of these classes have over 100 pupils and are held outdoors, usually in the shade of a tree. They invariably take place either in Chichewa, the national language, or in the home language of the pupils if the teacher can speak it. Although the chalkboard was used in every lesson observed by Croft, there were few other standard classroom resources, such as writing materials and textbooks. Teachers have learned to use the limited natural environment (stones, leaves, etc.), but above all, the primary resource is the teacher him/herself as a performer. This use of personality Croft calls a 'teacher-intensive teaching style' (p. 117). This led to examples of teachers combining classes outdoors and some team-teaching, where the women took turns to be the presenter.

Other aspects of Standard 1 oral culture as described by Croft focus on the use of choral response. This is common in early language classes all over the world, and in mathematics is a tradition and well-known method for learning multiplication facts. Indeed it might not be too far-fetched to see early mathematics at this level as just another language that is being learned. Over and over pupils repeat the words of the teacher, the words of another pupil, complete the teacher's sentence, and reinforce both the content and the social cohesion, which might otherwise be fragile (p. 127).

One of the advantages of oral methods for learning is the development of memory in a situation where reading is either difficult or impossible. One of its apparent disadvantages is that concept development may not occur. Particularly in the field of mathematics, where there is a tradition worldwide of rote learning when understanding gets too demanding, a culture based around use of oral methods may have a very limited idea of what is meant by 'understanding a mathematical idea'. (At the elementary level, this distinction is clearest in the difference between rote-learning that  $3 \times 5 = 15$ , and understanding what this particular multiplication means in its many possible embodiments: grasping it to the extent that real life situations involving this idea are instantly recognised and categorised as applications of that well-understood fact.)

#### *Some questions*

- Am I going to find teaching methods based on local resources, by teachers creating their own TALULAR?
- Are the teaching methods going to be largely oral, particularly in lower year levels?
- What reasons will teachers give for their choice of methods?
- Does oral teaching of mathematics assist the understanding needed to make progress in later years?
- If oral methods are truly useful in teaching, what does this imply for teaching in classrooms and teacher's colleges?
- If oral methods are not useful to promote understanding, what can be done about replacing them in a culture with a strong oral tradition of learning?

These questions lead, in part, to the research variable [\*Teaching style\*](#). Some implications are addressed in sections [8.1.3: Quality of learning](#) and [8.1.5: Professional learning for mathematics teaching](#).

### **2.2.12 Assessment and ranking in Malawian schools**

In Malawi assessment and ranking are used regularly from Standard 1. Miske et al (2003b, part of the IEQ/Malawi project) suggest that there are three purposes of regular testing:

- motivation of pupils;
- measuring of the amount of 'learning' that has taken place; and

- ranking of pupils, for the purpose of deciding who is promoted and who repeats (or drops out).

Kellaghan and Greaney (2003) explored the quality of the assessment and found it ‘deficient in many ways’ (p. 11). Much data is generated by this testing, but in general teachers are unable to use the information to assist individual pupils because there is simply not enough time – there are too many pupils to deal with. Instead it is used to rank pupils.

Susuwele-Banda (2005) found similar views about assessment in a study of six primary teachers. Testing was not designed to help pupils to improve, so no mechanism for feedback was used. One of Susuwele-Banda’s conclusions is that the partnership of teaching and testing supports only a restricted kind of learning: ‘memorization of processes and procedures.’ (p. 141).

Miske et al (2003b) reported some findings about teachers’ capability at writing tests. They noted that although teachers seemed to test most of the content taught during the term, however ‘a large number of questions was not part of the material from the term.’ They noted that ‘the test construction process varies from district to district, school to school, or teacher to teacher’ and ‘this variation is a concern’. They noted that teachers thought that tests are ‘fair if they test material that had been taught’, yet ‘the tests are not always fair, and pupils bear the brunt of poorly constructed tests’.

Miske et al collected information about the number of pupils who were present on test days and compared this to the number who were enrolled. This revealed that only about a third of the pupils actually showed up for the tests! On exploring the reasons for this extensive pupil absence for the tests, they suggest that many pupils ‘stay home because the rewards are not enough to help them overcome their fear’ (Miske et al, 2003b, p 16). Fear of mathematics tests (known as ‘math anxiety’) is a well-researched phenomenon in developed countries, particularly amongst females (Frankenstein, 1989). The suggested fear is based on the life-changing consequences of performing well or badly on an examination, and this comes from the use of examination results for *ranking*.

In Malawi, and possibly other countries, the results of many tests throughout the year are added to provide a crude ranking of students by ‘academic ability’. This is so inadequate both as a measure of what it purports to measure and as an instrument to improve learning that ranking can be seen as a most unfortunate practice, inherited from colonial education days under the British. The practice of ranking frequently determines which pupils will be allowed to proceed to the next level, and who will be required to repeat, unless they choose to leave the system. Marks are averaged and used to provide a yearly score and a ranking of the student within the class. This is unsatisfactory because of the dubious use of mixed data, and the doubtful validity of many of the scores involved. The competitive pressure this puts on learners at all stages and ages comes to dominate the education system (Miske et al, 2003a and b).

To obtain a rank in the class for each pupil, the percentage marks obtained on a number of tests (in different subjects) are added, and the totals provide an order of merit for the pupils in that class (Miske et al, 2003a). This method (crudely adding percentages) is highly suspect on statistical grounds (for example, subjects with a wider spread – often mathematics – automatically have more influence over the ranks) and the ‘pass-mark’ usually taken as 50%, is entirely arbitrary. The consequence of missing an end-of-term exam is certain to be a drop in rank as non-attendees receive 0% as that subject’s contribution to their rank, so that skipping an exam is inviting failure. Even legitimate absences are not excused. If it happens on an exam day, a legitimate absence can have the consequence of failure and dropping out of school.

According to Miske et al (2003a, p. 9) the major educational purpose of ranking is a mixture of encouragement and shame. They point out that research (in developed countries) has shown that competition does not have the advantages often claimed for it, and in particular it

disadvantages girls. The alternative of cooperative learning has ‘consistently positive’ effects. Similar research also shows that pupils who do poorly relative to their peers are not helped by public shaming (Miske et al, 2003a, p 11).

Teachers claim that they use the rankings so they know which pupils need extra help. However reducing the wealth of useful information from a number of tests to a single class rank number does not tell the teacher what remediation is required to assist pupils. It gives pupils no feedback that will improve learning. Given the enormous class sizes facing the teachers on a daily basis, giving real help to needy individuals seems rather like wishful thinking.

Teachers believe that ranking motivates pupils to try harder, and this might be true for the most able pupils. For the less able, given the additional pressures to leave school (costs, lack of interest, marriage, etc.), it is more likely that tests and ranking precipitate the decision to drop out of school, since a poor rank represents failure. Surely this is one of the reasons that many pupils would rather not attend school on test days. So those who are near the top of the class will probably work harder, some will repeat the year – with no real idea of how to do better next time – and many will drop out from discouragement.

Tests are mainly used for providing data for ranking and the consequences of promotion and repetition. Testing is not used for feedback to pupils, as neither ranks or percentage marks tell them how to improve. Similarly testing and ranking is not used to provide helpful data to teachers about how to improve teaching. Only parents make use of test results and ranking, and for many pupils a poor position in the class ranking may well provide the motivation to withdraw the pupil from school. For many students, the hurdles of surviving grossly under-resourced and extremely large classes, sometimes conducted in a foreign language, are so great that they cannot complete even Standard 3 or 4. Mathematics at these levels seems to be largely a matter of rote learning many meaningless abstract facts, and this is enhanced by the oral style of learning and lack of materials. Nevertheless the pupils are tested very regularly, and ranked as a result, and many of them told they have not passed, and must repeat. Mathematics is just one of the many hurdles these children must jump.

From Standard 5 to 8 the testing, ranking, repeating and attrition continues. Much of the end-of-term testing is supposed to be practice towards the final selection examination at the end of Standard 8. In fact it forces many to drop out. The dominant role of English language selection examination at the end of Standard 8 means that there are many who choose to repeat Standard 8 in order to improve their chances, sometimes many repetitions. For many students passing well in that final examination is essential to improving their chances in life and providing income for their family.

#### *Some questions*

- Does ranking as described above still occur, and what are teachers’ attitudes towards it?
- Is there an official policy about assessment and ranking? If there is, do teachers know of it and is it being implemented?
- What is the real role of assessment in year levels below Standard 8?
- How do teachers use the data about which pupils are in need of help? Do they assist pupils in class, or hold extra classes after hours?
- Is frequent repetition of Standard 8 being encouraged or discouraged? Is there an official policy on this, and if so, what do teachers know of it and how do they react to it?
- How pervasive are the examination requirements in Standard 8 in determining what is taught and how it is taught?

- To what extent does the academic curriculum of the secondary school determine what is examined in Standard 8 and hence taught and tested in lower levels? If this practice exists, how does it match any official policy about the purpose of education?

These questions lead, in part, to the research variable [Assessment](#). Some implications are addressed in section [8.1.6: Assessment](#).

### **2.2.13 Curriculum reform in Malawi: PCAR**

While in Malawi I had the good fortune to be able to observe at first hand the process of curriculum review, and interview many of its leading academics stationed at the Malawi Institute for Education (MIE). Some of this material was available in the literature and is reviewed here.

#### ***Primary Curriculum and Assessment Review (PCAR)***

The current curriculum for Malawian schools was published in 1991. There have been dramatic changes to schools since then, and that curriculum is clearly no longer relevant. Because of the changes, the quality of basic education has suffered.

... research done by the Improving Educational Quality II/Malawi (IEQ/Malawi) Project in Mangochi and Balaka districts revealed that pupils in Standards 3 and 4 were unable to read and write, or carry out basic mathematical operations.  
(Mchazime, 2003, p. 1)

In response to concerns over poor achievements, and a concern for better use of assessment information to guide the process of learning, the Ministry and the MIE have set up the process called Primary Curriculum and Assessment Reform (PCAR).

A number of other concerns have also been expressed about the current primary school curriculum. Malawian educationalists feel that the curriculum is elitist and that it does not give pupils skills that would make them survive once they leave school. They also feel that the political changes that had taken place in 1994 which brought in democracy and its related institutions that nurture democratic principles need to be reflected in the curriculum.  
(Mchazime, 2003, p. 1)

Revising all courses and training teachers to use them is quite a challenge. It requires provision of not only course statements but pupil textbooks and detailed Teacher Guides, and the introduction to teachers of new emphases and techniques, including a new form of assessment, called 'Continuous Assessment'.

When I visited Malawi, the PCAR writing process was well advanced. In contrast to the relatively simple aims of primary mathematics education in 1991 ("Pupils should apply mathematical skills in everyday life.") the Developmental Outcome for the PCAR related specifically to mathematics reads:

Learners should be able to apply mathematical concepts in scientific, technological, socio, environmental, cultural and economic contexts to solve problems.  
(MoEST and MIE, 2004, p. 15)

This was expanded in the Rationale for Numeracy and Mathematics.

Numeracy and mathematics aims at developing learners' critical awareness of how mathematical relationships are used in social, environmental, cultural and economic contexts. At an early stage, the learners will be enabled to count and to carry out basic mathematical operations. At a later stage the learners will be able to make inferences using manipulated data and to apply mathematics for solving practical problems in daily life.  
(MoEST and MIE, 2004, p. 17)

It is clear that the fundamental goal of PCAR mathematics (as stated) is preparation for 'daily life', and not for examinations. For comments on the PCAR mathematics syllabus, see section 7.5.2.

*Some questions*

- The PCAR process will set the style for curriculum, and presumably assessment, for many years to come. Is it going to resolve the tension between the competing goals – academic and practical – that has left the system with an examination-driven curriculum and little alleviation of poverty?
- Can teachers cope with substantial changes to the curriculum?
- Will teachers be adequately supported (with INSETs, supervision, textbooks, resources, classrooms, and reduced class sizes) to make the revisions work well?

These questions lead, in part, to the research variable *The purpose of mathematics education*. Some implications are addressed in sections 8.1.5: Professional learning for mathematics teaching.

## **2.2.14 Assessment reform in Malawi: Continuous Assessment**

At classroom level, teachers do a vast amount of testing, particularly of mathematical skills.

The assessment of students' learning in the classroom (both by teachers and by students themselves) is an integral component of the teaching-learning process. Much of this kind of assessment is subjective, informal, immediate, on-going, and intuitive, as it interacts with learning as it occurs, monitoring student behavior, scholastic performance, and responsiveness to instruction. Its role is to determine students' current level of knowledge, skill, or understanding, to diagnose problems they may be encountering, to make decisions about the next instructional steps to take (to revise or to move on), and to evaluate the learning that has taken place in a lesson.  
(Kellaghan & Greaney, 2003, p. 11)

The paragraph above represents an ideal, sometimes called 'continuous assessment'. In this view of learning the teacher gathers many kinds of evidence and uses this to support planning of further learning. In reality, Malawian teachers in over-crowded classrooms are poorly trained or equipped to act in this way. As a substitute, they offer frequent written tests to their pupils, in order to determine whether or not they are achieving. The quality of their tests may not adequately reflect the range of learning goals that they are supposed to be addressing.

### ***Continuous Assessment (CA): the Standard 3 trial at Ntcheu, 2003***

The idea presented by the IEQ/Malawi team at a national conference was

that continuous assessment is a way of finding out what pupils know, understand and can do. Its purpose is to promote learning although it may lead to evaluation. Information from assessment should help the teacher to improve his/her teaching and then lead to improved pupil learning.  
(Mchazime, 2003)

Consequently IEQ/Malawi mounted a feasibility study to explore the possibility of using continuous assessment (as defined above) in Malawian schools. It took place in 21 schools in the Ntcheu district, using 51 Standard 3 teachers and the heads of the 21 schools. It involved four week-long inservice courses throughout 2002, run by the IEQ team. These involved practical workshops and discussions of the problems (and proposed solutions) involved in implementing the ideas in the real classroom situation. Between INSET sessions, the IEQ team visited the teachers twice per term, and Primary Education Advisers visited more frequently. (Mchazime, 2003)

The teachers were involved as full partners in developing an approach to Continuous Assessment that would work in Malawi.

The role of teachers was to try out the continuous assessment model at their schools, and to discuss with colleagues how they were implementing the model, what was successful for them, and ways they thought they could improve on the model. Teachers were asked to come to residential workshops with their creativity and criticisms of the model. For most teachers this was a transformative experience in that many of them had never participated as contributors in an educational in-service program.  
(du Plessis, 2003)

The feasibility study took place in 51 classrooms of 21 schools, in the subjects of Chichewa, English and Mathematics. For each subject the Standard 3 curriculum was split into six levels, and represented on a coloured chart using rainbow colours (red to purple) to indicate progress through these levels. In order to progress from one level to the next, pupils had to successfully demonstrate individually to the teacher that they could do the related assessment tasks. There was a great emphasis on encouragement and reduction of anxiety.

Instead of teaching and conducting tests to be used for ranking pupils, teachers were encouraged to perform individual assessments of pupils' specific skills and to use them to plan further teaching. All pupils start at the lowest level and move, once successfully assessed, to the next level. The record-keeping provides the teacher with knowledge of exactly where each child is located in this ladder to success (du Plessis, 2003).

In the 'Training Manual' produced by IEQ/Malawi (2003c), the ideas are described this way:

Continuous assessment is a package of concepts and tools that contributes to the overall evaluation of the child. The package includes:

- Uncovering the curriculum ...
- Pupil and teacher self-assessment ...
- Emphasis on enhancing pupil-teacher relationship ...
- Teaching And Learning Using Locally Available Resources (TALULAR) ...
- Conducting assessment activities ...
- Recording grades ...
- Managing the class during assessment ...
- Using effective remediation and enrichment techniques ...
- Reporting to pupils on their performance ...
- Reporting to parents and community on pupil performance...

All pupils start at the lowest level and move, once successfully assessed, to the next level. The record-keeping provides the teacher with knowledge of exactly where each child is located in this ladder to success. In Mathematics this meant that 37 sub-skills were split into six levels (du Plessis, 2003).

A very significant part of the feasibility study was the emphasis it placed on the use of teaching aids: TALULAR ('teaching and learning using locally available resources').

A number of teachers stated candidly that making their own materials is very time-consuming, but they are seeing enormous improvements in pupil learning in the classroom as they use these materials. (Miske et al, 2003b)

TALULAR enhances the production and use of teaching aids. This refers to counting frames, charts and other demonstration tools. Useful though these are, they are not integral to the ideas of continuous assessment, as they would also lead to better teaching using the traditional Malawian methods based on oral-culture.

Since the assessments take place with individuals in a large class setting, the management of the rest of the class is very important. The use of individual and small group activities was encouraged as part of the in-service weeks. This led to the need for teaching to the different levels which became apparent in the classroom. The theory says that remediation and enrichment are the basis for putting students into groups with similar needs.

Additionally, as teachers analyze the results of the assessments they will notice that there may be a number of pupils in each level in each subject. The instructional strategies to deal with this situation require differential learning within the same classroom. (du Plessis, 2003)

Organising a class of 100 to learn at different levels, while you are also engaged in performing individual assessment interviews, is a formidable challenge. The documentation from IEQ/Malawi is notably silent on whether teachers have been able to make this change, in mathematics or any other subject. The closest they get is the following paragraph.

Individual continuous assessment has helped teachers to identify pupils' strengths and weaknesses. Addressing these strengths and weakness [sic] by providing more than one learning activity in a

classroom is the next step. ... Residential workshops focused on equipping teachers with several strategies to teacher [sic] a particular topic or skill. Rather than remediation and enrichment taking place after class we suggested ways teachers could integrate remediation in regular classroom teaching. (du Plessis, 2003)

On the evidence, the trial teachers did not engage in 'differential teaching'. They have become more aware of the differences, but dealing with them is the 'next step'.

Quantitative results from the project involve comparisons between the Standard 3 pupils in the 21 Ntcheu schools and the comparative students in Mangochi and Balaka from the IEQ/Malawi project described above. The comparative gains were much greater in the continuous assessment classes than in the others. On the mathematics test the gain on the 80 items was 14% during 2002, compared to Mangochi and Balaka students who gained only 6%.

Gains were highest on the "numbers" sub-section of the maths assessment, in which pupils were asked to count large numbers, identify and write large numbers, and identify and order large numbers in a consecutive series. Pupils in the Ntcheu continuous assessment classes gained an average of 21 percentage points during the year, compared to a 10 percentage point gain in Mangochi and Balaka. (du Plessis, 2003)

Two critical observations need to be made about the quantitative results quoted. Firstly the largest gains described above correspond to the content of the lowest of 37 sub-skills of the curriculum for Standard 3 mathematics, described by du Plessis (2003, p. 9) It is encouraging that the lowest level was done thoroughly, but it suggests that many students took a long time to get through the lowest red level.

The second concern is whether the samples were really comparable. The importance of home language has been established above ([section 2.2.8](#)) and will be developed in [section 2.3.4](#). The population of Ntcheu is 96% Chichewa speaking, but the Mangochi-Balaka sample has a clear majority of Chiyao speakers – about 70% of Mangochi pupils are native Chiyao speakers and these dominated the sample. These Chiyao pupils were struggling to learn mathematics in an unfamiliar language (Chichewa), a handicap not constraining the Ntcheu pupils.

Despite doubts about pupil performance, qualitative results from the study are very positive. Miske reports that:

- Pupils felt they were learning this year much more than in other years. Pupils were genuinely able to do what the teacher's records said they could do.
  - Teachers can 'assess pupils, record the information, and use the results of the assessments to inform their teaching'. ... 'Teachers have become more assertive.'
  - Teachers collaborate and share work with their colleagues in making materials and talking about teaching and learning.'
  - 'A more child-friendly environment is replacing the environment of fear in the classroom, and pupils and teachers alike are pleased with the change.'
  - Head teachers and parents are pleased with the changes.
- (Miske, 2003, p. 4-6)

However given all the extra support the teachers received in 2002 it is not entirely certain how much of this is due to the newer methods they were using and how much was the 'Hawthorne' effect. (Miske, 2003, p. 18)

Some of the 'challenges' encountered during the study are described by du Plessis (2003). These were large class size, the lack of experience in detailed record-keeping, applicability of the model to subjects other than Chichewa, English and Mathematics, the failure of self-assessment as a tool, reporting to parents and the clash between the tradition of the use of assessment for ranking and promotion and the goals of continuous assessment.

Several writers have praised the feasibility study, but referred to the substantial future challenges if continuous assessment is to be introduced far more widely. Miske (2003b) mentions six challenges.

- Working within the impact of AIDS both in terms of teacher illness and death, and pupil absence, drop out and hunger.
- Improving the relative performance of girls, and their tendency to drop out earlier.
- Finding the resources to change the long-term traditions. 'What ideas about assessment in the culture of primary education need to be addressed?'
- Seeking to include the excitement of 'pioneering' in the ways other teachers become involved in the expansion phase.
- Dealing with the relatively poor performance in English learning.
- Finding methods of making continuous assessment run smoothly in large classes, and dealing with other practical teacher concerns.

### *Some questions*

- Continuous assessment as trialled is a style of assessment, of teaching and of learning. That is a radical change. It is not readily accepted in many western countries, particularly in the area of mathematics. Are the Malawian teachers ready for this change?
- If Continuous Assessment is implemented, will it be well-planned and resourced, including the levels of support that made the trial project successful?
- Are there better ways for Malawian teachers to move away from the examination-driven approach that currently dominates what happens in schools at all levels?

These questions lead, in part, to the research variable [Assessment](#). Some implications are addressed in section [8.1.6: Assessment](#).

## **2.3 Primary mathematics education in Malawi**

### **2.3.1 Performance of pupils on mathematics tasks**

There has been some research done on the performance of pupils in mathematics and the outcomes are not encouraging. Given the obstacles described above, the results are not surprising – indeed it is surprising that anything is learned at all. The actual results gained by pupils suggest a disappointing level of performance and poor retention of facts and routines. It is difficult to get recent pupil performance data, but I have three sources of evidence. However, there is no information available on the mathematical performance of pupils during Standard 1.

#### ***IEQ/Malawi project (2003)***

In order to assess the mathematical competence of pupils in Standards 2, 3 and 4, the IEQ/Malawi project used a test battery of 80 items. The items included numeration, addition, subtraction, multiplication, division, money and simple measurement (IEQ/Malawi, 2003b, p. 54). This test was given to pupils in Standards 2, 3 and 4 in 1999 (March and October). The results in October were as listed below:

Standard	2	3	4
Score/80	41	56	65

Table  
2.10



In raw scores, there was little difference between the performances of pupils with different home languages (Kaphesi, 2001). However there does seem to be a reduction in improvement between Standards 3 and 4 compared with 2 and 3.

The same items were given to pupils as they passed through several levels and over time their growth in competence was measured. Many of these students were in Standard 5 for the last testing, but some may have repeated and some were not included in later testing having dropped out of school. The trend lines show a steady increase in performance over roughly 3.5 years, much in line with the results above. Boys performed consistently above girls (by 1.64 points out of 80), and children who repeated Standard 2 in 2000 were consistently 3.4 points below the non-repeaters (IEQ/Malawi, 2003a, p. 6).

The IEQ/Malawi data was able to detect a relationship between mathematics scores over time and knowledge of pre-literacy (letters and basic concepts about print). They found that Yao children with poor knowledge of print performed 10 points (out of 80) below their more knowledgeable classmates. Over time, these children improved in literacy, gradually catching up to the rest of the class, being only 4.36 points behind in 2002.

Insights about the influence of real-life contexts can be sought from the pupils' performance on the word problems, selected from the 80 items mathematics test. The pupil took the test individually with their teacher. The first conclusion that surprised the IEQ/Malawi team was that at all levels and in both March and October 1999 pupils performed better on the word problems compared to the equivalent symbolic problems. (Items which are to be regarded as similar include this pair: "Grace has 4 younger brothers and 1 older brother. How many brothers does she have altogether?" and " $2 + 4$ " which was set out vertically.) The difference was greater at lower levels, as the children seemed to use real-life contexts to think out the problems, and 'real' clues were missing in the abstract form. This difference was however reversed in the measurement problems, presumably because the pupils were not able to visualise the real-life contexts involving litres and kilometres at the lower levels (Chilora et al, 2003).

### ***Kishindo et al (2005)***

In 2004 group of educators from MIE, attempted 'to see how learner achievement data can be collected without using national examinations which are administered by the Malawi National Examinations Board (MANEB).' (Kishindo et al, 2005). This was the first study of its kind in Malawi, and was basically a pilot project. 'End of year' tests were given to pupils in Standards 3, 5 and 7 to see how well prepared they were to move to the next level. In mathematics the percentages of pupils who earned different percentages of the available marks are shown in the table.

Standard	3	5	7
Score > 30%	75%	58%	32%
Score > 50%	36%	12%	1%

Table  
2.11

Not only are these very low overall, but it is clear that the performance gets relatively much worse as pupils move up the school (Kishindo et al, 2005).

### ***Standard 8 examination outcomes***

The performance of pupils in the Standard 8 examination is the focus of the entire primary school. How well do pupils perform at this level? During my visit to the Malawi National Examinations Board I was shown the distribution of raw marks and grades at a recent Standard 8 mathematics examination. Half the entrants received less than 37% of the possible marks. About one third of the entrants scored over 50% on this paper and actually passed. In

[section 7.7.2](#) I perform a descriptive analysis the examination paper that led to these results. This will help with some of these questions.

*Some questions*

- Why are pupils not learning mathematics to a satisfactory standard?
- What influence does language have on the learning of mathematics?
- Are teachers able to adequately ‘cover’ the syllabus, given their large classes and frequent pupil absences?
- How is learning of mathematics affected by the shortage of textbooks and other resources?
- Is there a problem with teaching methods, given the very large classes particularly at lower levels?

These questions lead, in part, to the research variable [The purpose of mathematics education](#). Some implications are addressed in section [8.1.5: Professional learning for mathematics teaching](#).

### **2.3.2 Teaching methods in mathematics lessons**

The IEQ/Malawi project used statistical methods to search for teaching methods that were related to improved learning in mathematics. The observation schedule used to assess the teaching methods in Standards 2, 3 and 4 by the IEQ/Malawi project rated teachers on the categories: ‘Uses pair work’ and ‘Uses group work’. It seems that the IEQ/Malawi project valued these ‘western’ ways of organising learning. It is interesting that the observation schedule includes, under ‘Degree of pupils’ participation’, the item: ‘Teacher promotes learning with minimal use of drilling and choral response.’ (IEQ/Malawi, 2003b, p. 101). This indicates that ‘oral culture’ methods (such as choral response) are not promoted by IEQ/Malawi. Given the observations of Croft (2002b) that teaching at this level takes place largely orally, in a mode that emphasises the strengths of learning in a oral culture, it could be that the largely ‘written culture’ assumptions of the teaching methods are inappropriate, at least at this early level of primary school.

The results gave very mixed messages, to the extent that it is not possible, from IEQ research, to suggest teaching methods that are more or less effective than others.

*Some questions*

- Although my research will use a limited sample, I will try to explore this issue in depth: what teaching methods do teachers currently use and why? (I will be unable to canvass the efficiency of these methods in terms of learning, as I will not be able to test pupils.)
- Do teaching methods vary with year level?
- Are teaching methods influenced by the language of instruction?
- Do teaching methods depend on the teacher’s confidence with the content, or the nature of the material to be taught?
- To what extent do teaching methods concentrate on understanding, on memorisation and drill, or on applications to the real world?
- Are there official policies regarding teaching methods to be used in classrooms? If so, are they being promoted in teachers’ colleges, and supported by head teachers?
- How do any official statements about teaching methods relate to the large amount of testing and examinations that take place at all levels?

These questions lead, in part, to the research variable [\*The purpose of mathematics education\*](#). Some implications are addressed in section [8.1.5: Professional learning for mathematics teaching](#).

### 2.3.3 The 1991 Primary Mathematics syllabus

The current syllabus was published in 1991. The current official purpose of *mathematics* education is expressed in the 1991 syllabus for Primary Mathematics in one short sentence.

National Primary Education Objectives:

#21. Pupils should apply mathematical skills in everyday life.

This is spelled out in more detail in the Rationale for the Teaching Syllabus in Mathematics (p. 1).

Mathematics forms part and parcel of today's every day life. The pupils are faced with problems needing practical mathematical solutions in most of their daily engagements [sic]; at the market, grocery shop; in the home when accounting for several domestic undertakings; at the hospital when following medical prescriptions and in many other situations. Because of all these, the recent role of Mathematics has hence been to develop skills applicable in the solving of such everyday problems. (MoEC, 1991)

The rest of the 1991 Mathematics Syllabus book is a detailed description of the content to be taught, the Scope and Sequence charts for each Standard and the Teaching Syllabus, providing (for each term of each year) objectives, suggested teaching/Learning experiences and materials and suggested assessments.

The major support for teachers comes in the form of the textbooks and related Teachers' Guides. As an example I cite the textbook for Standard 5, the lowest level to be published in English. The style for the Standard 5 book was consistently the same throughout its 206 pages.

- Topic heading
- Unit heading (several units per topic)
- Exercise heading (several exercises per unit)
- A very simple worked example, *very rarely* related to daily life.
- A number of practice problems very closely following the example, again usually abstract.

The mismatch between the stated objective ('apply mathematical skills in everyday life') and the textbook is glaring. There is no explanation of the ideas behind the worked example, or a summary of the steps involved. This means that neither the pupil nor a teacher can read to improve their understanding of the mathematical ideas involved. The textbook is therefore a collection of examples of rote procedures to be followed, but without explanation or even a procedural summary so that the general method can be memorised. Pupils (and teachers) must somehow infer the general methods from a single example. They rarely related to everyday life.

At Standards 1 to 4 the texts are written in Chichewa, but the teachers' guides are written in English (except for the guide for teaching the subject Chichewa). But the teaching at these levels rarely takes place in English so the teachers have to think in two languages (or three if they actually teach in Chiyao or any other home language). Given the lack of mathematical understanding and the very large classes at lower primary levels this extra demand on teachers seems unnecessary. When asked about this several people at MIE simply stated that 'it is assumed that teachers speak English well enough to understand the guide', but acknowledged that this assumption is probably no longer justified.

An additional problem arises from the loss of teachers' guides and their lack of availability. In surveying teachers in 2002 the IEQ program found that only 56.5% of teachers had access to the mathematics teachers' guide for their Standard. They were only published in the early 1990s and in 2005 were not available for purchase or distribution.

The fact that the syllabus is dated 1991 makes it irrelevant. In 1994 Malawi moved to Free Primary Education, so that lower primary level classes are now so very large that many don't even fit into classrooms and teachers are poorly trained and in very short supply, particularly in rural schools. The consequence is that the 1991 syllabus is now impossible to implement even for a capable teacher with the best of intentions.

#### *Some questions*

- Do teachers have time to teach the content at each level, and do pupils have time to learn it?
- Why is the detailed prescription for teaching so far from the stated goal (usefulness in everyday life)? How did this come about?
- How do teachers in Standards 1 to 4 cope with texts in Chichewa and guides in English?
- Remembering that many teachers are either untrained or poorly prepared to teach, if the textbooks and guides do not provide explanations to the teacher of the mathematical content, how can they be expected to remember it and teach it well?
- During 2005, a new syllabus was being prepared, called PCAR (Primary Curriculum and Assessment Reform). Does it have a better match of goals and details? Does it provide better support for teachers? Is it realistic, given the multiple constraints of primary schools?

These questions lead, in part, to the research variable [\*The purpose of mathematics education\*](#). Some implications are addressed in section [8.1.5: Professional learning for mathematics teaching](#).

### **2.3.4 Language in mathematics education**

In Malawi the policy about language of instruction is that teachers will teach in the pupil's home language in Standards 1 to 4. In Standards 5 to 8 the language of instruction will be English. The issues arising from this have been discussed in a previous section ([2.2.8](#)). In this section I will look at the implications of these complex matters on mathematics teaching and learning.

Mathematics has its own special uses of words, in both English and other languages, and a special formal style that makes success in examinations a challenge for those who have not learned the style and the jargon. While the language situation is complex in many classes in Africa, it is particularly difficult when mathematics is being taught, because of the special features of mathematical English, the formal nature of some mathematical text and the difficulty for many pupils of the mathematical ideas themselves, which often do not seem to relate to the home life, daily experience or culture of the child.

Setati (2003, p. 5) outlines four dimensions along which the teacher has to balance her language use in the primary school in South Africa:

- ordinary English and mathematical English.
- formal and informal mathematics language.
- procedural and conceptual discourses.
- learners' main language and the language of learning and teaching.

Code-switching is the practice in which teachers move back and forth between languages. Involved at times are the national language, English and the home language (when this is not the language of instruction). There have been several studies of this in the context of mathematics teaching in South Africa (for example, Setati & Adler, 2001, Setati et al, 2002, Holmarsdottir, 2003). Holmarsdottir (2003) points out that many teachers (in South Africa at least) receive no training in the effective use of code-switching during their training, and even feel guilty when they do it.

By Grade 5 in Malawi only about half the pupils remain. Many of those who have dropped out have probably not achieved literacy or numeracy in any language. Now the official language of instruction has moved to English. In Standards 1 to 4, English will have been taught as a second (or foreign) language and pupils are supposed to have enough English to learn successfully in that language exclusively. The textbooks are written in English, at a level often too difficult for many pupils. There is a great need for code-switching so the teacher can explain the English of the books.

In a recent study, Kaphesi (2001) worked in a very similar geographic area to my study and compared the linguistic behaviours of teachers when teaching mathematics to junior primary classes in Chichewa and in English. The pupils were ‘predominantly Chiyao-speaking, although most of the pupils were also fluent in Chichewa.’ (p. 101). He asked lower primary teachers to teach mathematics in both Chichewa and English and compared their performances. His findings support the importance of the creation of a good mathematics register in Chichewa. ‘The teachers’ lack of awareness of mathematical register of terminology in Chichewa may make it difficult for them to discuss mathematics in the classroom.’ (p. 104).

Kaphesi’s results highlight tensions that may exist in most primary classrooms. In the lessons Kaphesi observed, taught to Standard 1 to 4 pupils in both Chichewa and in English, the teachers always did most of the talking. Teachers and pupils are more comfortable teaching and learning in Chichewa.

‘Chichewa medium mathematics lessons were more successful than the English medium mathematics lessons.... Pupils were livelier and more involved in Chichewa than in English.’ (p. 258).

Despite this:

- there is a lack of mathematical language in Chichewa, making some topics hard to teach;
- teaching mathematics only in Chichewa in early years makes pupils less than adequately prepared to learn mathematics in English from Standard 5;
- there is inconsistency in the use of language in textbooks, and other materials;
- teachers need to spend time teaching mathematics in English to maintain or improve their own English competence, in case they are later required to teach upper levels;
- Teacher Guides are written in English only, even for Standards supposed to be taught in languages other than English;

Kaphesi identified five key dilemmas of the language policy in the context of mathematics education (p. 282).

- teaching for immediate learning of content (Chichewa) vs preparation for future life;
- learning mathematics through language (Chichewa) vs learning language through mathematics (English);
- aiming to reach many pupils (Chichewa) vs permitting some to access more mathematical knowledge (English);
- teaching consistently in one language vs code-switching between two or more languages;
- teaching mathematics in Chichewa vs teaching mathematics in English.

Bi-lingual or even tri-lingual education is most common at the lowest and most crowded levels. This must cause many problems for pupils, and the rate of dropout is very large in these lower levels. There will be many other reasons for pupils dropping out of school, but lack of success in this complex language tangle must be part of the problem.

*Some questions*

- What is the actual language policy in Malawi? Are there pressures to change it?
- Do teachers know the language policy? Do they agree with it? Do they follow it?
- What happens in Standard 1 to 4 classes with two home languages?
- How does the practice of the language policy contribute to mathematical learning or lack of it?
- How do teachers instructing in Chichewa deal with the lack of terminology for some mathematical ideas? Does this force them at time to teach in English?
- Are teachers who teach in English to Standards 5 to 8 adequately prepared for that task?
- Do the teachers at Standard 5 to 8 always teach in English or do they code-switch?
- Are pupils in Standards 5 to 8 adequately prepared to learn in English?

These questions lead, in part, to the research variable [\*Language of instruction\*](#). Some implications are addressed in section [\*8.1.3: Quality of learning\*](#).

## **2.4 Malawian teacher preparation and development**

Much of the material above has dealt with matters that are directly the concern of the teachers: their conditions, successes and failures. Teachers are the chief implementers of many educational policies and their ability to achieve anything worthwhile in the face of the constraints within which they work needs to be praised. In order to better understand the past, and to consider the future, we need to review the preparation and continuing development of teachers in Malawi.

There are a number of pre-service programs that have been run at Teacher Training Colleges in previous years. Up until 1973 it was in the hands of the various missionary programs which ran 13 colleges at that time. Over the next 25 years these were reduced to six in the interest of efficiency, and at 1998 they trained 2730 potential teachers (Kunje & Chimombo, 1999, p. 13).

A 'normal' two-year program operated from 1975 to 1987, comprising 1.5 years in college and three months in schools. In 1987 a one-year version of this was introduced to speed up the output, but the quality necessarily dropped. This lasted only three years to be followed by the Malawi Special Distance Teacher Education Program (MASTEP), begun in 1990. Initially a two-year program combining college and distance education components was offered. Then this was shortened to one year in order to increase the rate of output of teachers.

Because of its sudden need to prepare thousands of new teachers at the advent of Free Primary Education in 1994, Malawi embarked on a program of 'initial preparation' for about 20 000 teachers after they have taught, totally untrained, for two years (on average). In 1996 Malawi Inservice Integrated Teacher Education Program (MIITEP) began and was training the last contingent of teachers in 2005. With all resources going on training teachers already in schools, one consequence was that no 'new' recruits were being trained between 1996 and 2005.

In 1998 a program was begun that partly aimed to support the school-based component of MIITEP, and partly to improve administration practices in schools. This was the Malawi School Support System Program (MSSSP). It ceased when the donor money ran out in 2002.

#### **2.4.1 Malawi Inservice Integrated Teacher Education Program (MIITEP) College program**

Most of the present teachers in primary schools seem to have been trained in the MIITEP two-year program. My results show that 66% of my sampled 83 teachers had been trained in this way.

In 1994 the new democratic government proclaimed that primary education, which had previously required school fees, would be free. The number of children attending jumped immediately from 1.9 million to 3.2 million, as over one million new hopefuls entered the system. The government soon realised that the system was ill-prepared to cope, and was faced with massive needs and few resources. The international donor community was keen to support the new democratic government and help them try to achieve Education For All, as this was soon after the Jontiem conference. The MIITEP approach was proposed, and soon put into place; possibly it was with far too little planning and thought.

The entrants were selected from those who held at least a Junior certificate, meaning they passed the examination at Form 2. They entered in batches and for each batch the program was essentially the same: three months residential college work, 20 months (less the vacation time) in schools usually near their homes, and one month at the end to review their knowledge and take examinations.

Kunje, Lewin and Stuart (2000) have written at length on the MIITEP program. The following material is taken from their analyses. However it should be noted that these comments were made in the early years of the program, and many of the problems described here might have been fixed in later years. A more recent analysis is not available; even Croft (2002c) relies on data from 2000.

The material for the program was written into several handbooks that provided the basis of the training in the six teacher training colleges. The closed material in the handbooks was reflected in the lecture method of delivery of the tutors as observed by Kunje et al (2000). As a consequence the trainees were getting the firm message, and one that reinforced their own previous education, that the pumping of facts into 'empty heads' is the way teaching should take place. This was a pity, because the average trainee had already been in the classroom and survived for about two years, and had a wealth of experience to bring to the discussion. This knowledge was strongly discounted. 'Few attempts seem to be made to capitalise on trainees' insights into learning and teaching based on experience in schools.' (p. xiii) Indeed the whole college experience was entirely theoretical, and rarely related to teaching, particularly in the large classes with few resources that the trainees were about to enter, or from which they had recently come. 'School-based practice, and the experiential base of trainees, is peripheral rather than central to the curriculum,' (p. xii).

One feature of the college program was an emphasis on teacher-made materials, under the umbrella heading of TALULAR (Teaching And Learning Using Locally Available Resources). Croft (2002b) feels that this emphasis, though having the best of intentions, could be unwise. She notes that this demand is greatest on infant teachers who have the largest classes and the most other demands on their time. 'TALULAR was most used by those who had adequate resources and adequate storage.' (p. 10). She also points out that the use of TALULAR might be perceived by the teacher to threaten the status of the teacher and school with the local community.

Noting that most teachers undergoing MIITEP training already had experience of teaching or at least survival in the classroom, Croft (2002c) points out that 'there were few attempts to



connect with the knowledge that student teachers had undoubtedly gained from teaching for an average of two years ... working alongside qualified teachers.' (p. 7). She indicates an alternative based on tutors helping student teachers to reflect and learn from their experience, 'so that they can sustain their professional development throughout their careers' (p. 12).

Croft (2002c) acknowledges that the printed materials were helpful to many student teachers, though the good teaching methods they recommended were often not followed by the tutors. She found that the college program was often focussed on certification and did not adequately deal with the realities of large under-resourced classrooms without furniture, etc. The knowledge being valued was that of the tutors, frequently western and often irrelevant to teaching in rural schools in Malawi. The knowledge that could have been valued and built on was that of the untrained but experienced teachers, knowledge that was distinctly Malawian and would have been very relevant to the future teachers, particularly in the lower levels where the vast majority of the pupils are located.

Stuart and Kunje (2000) describe a number of observed lessons by the college tutors; it is probably not surprising that those furthest from the modern ideas of teaching style (being *lectured* about in Foundation Studies) were the lessons on mathematics. The tutors were frustrated at having to 'cover' so much material in three months and so lectured in an even more concentrated way.

#### *Some questions*

- How well have teachers been prepared to teach by the 3-months MIITEP college program? Do they understand the content on which they were lectured? Do they generally imitate its lecture-style presentations? Or is it more that case (as sometimes appears true in other countries) that the short preparatory course made very little difference to content knowledge and teaching skill?
- What is currently happening in teacher training colleges? Are printed materials from preparatory courses constructed so as to be useful in later years of teaching?
- Is TALULAR the basis of good 'hands-on learning' or a burden to over-worked teachers? Is it used in colleges? Is it used in schools?
- How well-prepared are the mathematics tutors in colleges?

These questions lead, in part, to the research variable [\*Teaching style\*](#), and are addressed in sections [8.1.5 Professional learning for mathematics teaching](#).

The experience of the 'student' teachers when they went back out to schools for 20 months of 'supervised training' with 'distance education components' is described below.

### **2.4.2 MIITEP School-based Distance Education program**

The MIITEP trainees were moved out to schools after three months of theory. Because of the great shortage of teachers, particularly in rural areas, they frequently found classrooms needing their presence as full-time teachers, so they taught full-time and were consequently totally unsupervised. No doubt most learned a lot for themselves, since they were acting as grossly under-paid trained teachers.

In almost all situations they were given very little support from their more experienced colleagues, received few or no visits from the Primary Education Advisers (PEAs). Based on research in-country, Creed (2001) refers to 'the poor physical condition of schools, the lack of trained teachers and supervisors to monitor trainees and generally poor resources make school-based teacher development unrealistic in many schools.' (p. 29).

They were supposed to attend seminars in a local Teacher Development Centre, but many of these failed to take place. The Primary Education Advisers (PEAs) had only recently been



appointed and had little confidence and no preparation for this task. It was this deficiency that led to the MSSSP scheme described below.

Trainees were supposed to work through a series of distance education assignments and projects, but the marking proved too time-consuming and the trainees received little feedback.

The college tutors were supposed to visit the trainees in their schools five times to both support and evaluate their progress. In reality there was no chance for this to happen. Tutors were required back at the colleges to teach the next round of MIITEP students, and many schools were far distant or even impossible to reach in poor weather. Usually there was only one rushed and unhelpful visit (for assessment) from a college lecturer, usually someone they had not previously met. It would seem that planning was somewhat unrealistic, and did not adequately take into account the many difficulties and problems that eventuated, many of which could have been predicted.

#### *Some questions*

- The picture of MIITEP above is quite different from the glowing praise found in some literature. What is the truth about the effectiveness of this model?
- The key people in improving teachers might be the Primary Education Advisors. How are they being used to assist teachers know more about how and what to teach?
- Is the MIITEP model being continued, or will it be replaced by a different model, and why?

These questions lead, in part, to the research variable [\*Teaching style\*](#). Some implications are addressed in section [8.1.5: Professional learning for mathematics teaching](#).

### **2.4.3 Malawi School Support Systems Program (MSSSP)**

Firstly, who are the Primary Education Advisors (PEAs)? During the late 1990s, DFID funded the building of 315 centres in zones of 10 to 15 primary schools across Malawi, with the expectation that they would be used for teacher development – they were in fact called Teacher Development Centres. The Malawi Government agreed to place in charge of each of these a person called a Primary Education Advisor (PEA) whose role was not to be an inspector. These people would be able to support teachers in their district and bring them together for self-help sessions in the Teacher Development Centres.

This role is explicitly found in the Malawi Poverty Reduction Strategy Paper (Government of Malawi, 2002, p. 148). Many other people have found things for the PEAs to do to support schools. For example, PEAs were active in supporting teachers in the Continuous Assessment trials in Ntcheu in 2002 (Kamangira, 2003, p. 8). The PEAs at the Teacher Development Centres were mentioned as a critical part of the MIITEP teacher education program above.

How do the PEAs get their training? One attempt, run in the Teacher Development Centres from 1998 to 2002 when the funding ran out, was the Malawi School Support Systems Program (MSSSP).

MSSSP was designed to complement the activities of MIITEP by providing training for headteachers, other senior school staff and PEAs so that they could support student teachers during the school-based phase of their training. The knowledge, skills and attitudes that they developed were also to help them more generally in supporting qualified teachers in their professional development. ...

MSSSP therefore planned to give greater recognition to local teacher knowledge and how this knowledge was to be developed and shared among teachers in schools.  
(Croft, 2002c, p 5, 6)

The content of the MSSSP sessions were flexible and responded to expressed needs.

... MSSSP aimed to introduce new ideas of what teacher development was, so that it could respond to local contexts. Teachers, headteachers and PEAS could thereby be helped to develop the practice that was appropriate to them. This meant that training included exploring the roles that each of these groups

of people could play in teacher development. The TDCs were only a part of a system that could support school and classroom improvement.  
(Croft, 2002c, p. 14)

One of its aims was to help the school leadership to develop approaches to professionally develop their staff, and the methods used to achieve this were the same as the methods being recommended.

The main focus therefore is on teachers in a school working together to develop their practice using reflection, action research and peer coaching ... The senior school staff lead inservice training relevant to the school, and observe lessons to advise and supervise the teachers.  
(Croft, 2002c, p. 14)

Croft (2002c) presents a comparative analysis of MIITEP and MSSSP. She concludes that, by respecting the knowledge and experience of the teachers, the MSSSP model allowed them to grow and not just receive information, as in the 'expert presentation model' used in MIITEP.

#### *Some questions*

- If the PEAs are the key people in improving teaching competence, how has their training been maintained since 2002 when MSSSP ceased, and what is planned for the future?
- What role do PEAs play in the current support of teachers? How are the Teacher Development Centres being used?
- In the implementation of the new primary curriculum (PCAR) how will the PEAs and the Teacher Development Centres be used? Will methods used in MSSSP, such as 'reflection, action research and peer coaching', be used, or will the system fall back on the lecture-style (MIITEP) model?

These questions lead, in part, to the research variable [\*Teaching style\*](#). Some implications are addressed in section [8.1.5: Professional learning for mathematics teaching](#).

## **2.5 Educational policy making in Malawi**

The Malawi Poverty Reduction Strategy Paper (Government of Malawi, 2002) is the logical starting point. This includes an analysis of poverty in Malawi placing a great emphasis on exposing the inequalities in Malawian society. For example, the richest quintile consumes 46.3% of the available resources and the poorest quintile consumes only 6.3% of the same resources. It is even more extreme in the urban areas, where the numbers are 58.4% and 4.5% (Government of Malawi, 2002, p. 5).

The major poverty is located in the rural areas, home to about 85% of the population. Two-thirds of households have no beds, tables, chairs or bicycles. For the rural poor their major sources of income are subsistence farming (64%) and wages (17%), and 80% of 'spending' goes on food, largely food grown themselves. Food insecurity is the major basis of their poverty. Understandably, people want a secure economic future, including food security. Thus the national goal of the Government of Malawi is 'poverty alleviation'.

The claim that education produces wealth is common. The Malawi Poverty Reduction Strategy Paper (Government of Malawi, 2002) makes the claim:

The MPRS recognises that human capital is key to poverty reduction in Malawi. A healthy and educated population leads to increased productivity, better income distribution and a generally improved standard of living.

... the focus of Government's efforts and resources will be on basic education (primary education up to Standard 8 and adult literacy programmes) as the minimum requirement for poverty reduction ...  
(p. xii, xiii)

It is quite possible that the causality is in the opposite direction, with more money leading to more education.

The Malawian policy document 'Policy Implementation Framework' (MoESC, 2001) states this in section 1.2.1.

The broad policy of the Malawi Government is to alleviate poverty. Education is the centre-piece of this policy. Increased investment in education can yield broad economic and social benefits. Evidence shows that education is associated with increased agricultural productivity, higher incomes, and lower fertility rates and with improved nutrition and health.

### 2.5.1 PIF: Policy & Investment Framework

The Malawian Ministry of Education created the Policy and Investment Framework (PIF), released a revised version in 2001 and again in 2005.

The PIF approach, which will be reflected in the other sectors, spells out Government policy on education, the programmes that deserve the most attention and through the linked Mid-Term Expenditure Framework (MTEF) budgets for these programmes within the available financial resource package. ... This document thus defines the country's educational policies and outlines the MoES&C's priority programmes during the next 12 years. (MoESC, 2001, p. 1)

This document provides the framework for changes in education. It has five major objectives.

- The first is to increase access to educational opportunities for all Malawians at all levels of the system. ...
- Secondly, the PIF stresses the need for ensuring that Malawi's education system does not intensify existing inequalities across social groups and regions. ...
- The third objective is to maintain and improve the quality and relevance of education. ...
- The fourth objective is to develop an institutional and financial framework that will sustain Malawian schools and students into the future. ...
- Finally, the PIF recognizes that the proposed changes are unlikely to be achieved with the current level of funding from Government while appreciating that the Government is unlikely to spend more than the current 27 % of the national budget on education. The main thrust of the policy is that those in society who can afford it will be asked to share in the cost of education provision while ensuring that the poorer sections of society are not forced to drop out of school because of inability to pay. ... (MoESC, 2001, Objectives)

There follow detailed 'policies' and 'strategies' for primary, secondary and tertiary education including teacher training. I will introduce these at relevant points when discussing the policies related to this study. However the well-intentioned objectives above provide good examples for many of the sections below, and will be discussed in chapter 6 with comments in section 8.5.

#### *Some questions*

- How well-known is the PIF?
- How useful is the PIF to teachers? How useful is the PIF to officials?
- To what extent does the PIF guide policy in schools?

These questions are related to all research variables. Policy is related to practice in the research, analysis and implications, and in particular in sections [8.6: Constraints on policy makers](#), [8.7: Policies and purposes](#) and [8.8: Future actions and likely effects](#).

### 2.5.2 EFA: Education for all

In March 2004 The Government of Malawi released its Education for all Action plan (MoEST, 2004). The document is based around the six goals from the Dakar framework, and

relates specifically to previously developed documents of a similar type: PIF, the Poverty Reduction Strategy Paper (PSRP) and Vision 2020.

The Malawi EFA policy Framework has been developed based on what is contained in the already developed frameworks nationally such as the Vision 2020 (which contain visions and aspirations of Malawians), the PRSP and the PIF which is the overall guiding document of this Policy Framework. The PIF aims at directing the development of education and addressing challenges of the present and the future.

(MoEST, 2004, p. 6)

It claims that it 'translates the aspirations captured in Vision 2020, MPRS and the PIF into more practically defined and prioritised strategies' (p. 81). It reaffirms 'poverty alleviation' as the top priority, and makes the claim that education will enable this to occur.

The GoM has committed itself to poverty eradication as the highest priority, and as a necessary condition for desirable future development, with universal access to and participation in high quality basic education as one of the means of fulfilling this commitment.

(MoEST, 2004, p. 24)

The significant parts for this thesis are related to three of the six goals. It sets out policy in the form of 'Strategic objectives' and 'Major activities', similar to the PIF.

#### GOAL 6

Improving all aspects of the quality of education and ensuring excellence of all so that recognised and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

##### *Strategic objectives (sample)*

3. Develop and implement a relevant Basic Education curriculum that should include literacy, numeracy, HIV/AIDS and special needs education
4. Develop quality assessment at school level

##### *Major activities (sample)*

- Put in place incentives to encourage teachers to work in rural areas
- Train primary teacher educators (TTC lecturers)
- Train teachers in quality assessment including continuous assessment

(MoEST, 2004, p. xxiv)

#### GOAL 5

Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equity in education by 2015, with a focus on ensuring girls full and equal access to and achievement in basic education of good quality

##### *Strategic objectives (sample)*

4. Deliberate equity on policy e.g. 1:1 of boys and girls

##### *Major activities (sample)*

- Continue developing gender sensitive teaching materials
- Provide furniture in schools

(MoEST, 2004, p. xxii)

However Goal 3 is the core of the matter.

#### GOAL 3

Ensuring that the learning needs of all young people are met through equitable access to appropriate learning and life skills programs.

The preamble identifies literacy and numeracy as the key elements, and this paragraph appears on numeracy.

When teaching numeracy or mathematics, teachers are using methods which link numeracy to everyday practical situations, avoiding an academic approach; by using the most familiar language for instructions whenever needed; and by concentrating on the most essential numeracy skills, repeating,

expanding and diversifying exercises in this area at the expense of more advanced mathematics, which few pupils will be able to grasp or will ever need in adult life. This is one of the major challenges to be addressed in the teaching of mathematics.  
(MoEST, 2004, p. xviii)

However there are no Strategic objectives or Major activities that have any relationship to this.

### 2.5.3 Vision 2020

**STATEMENT:** By the year 2020, Malawi as a God-fearing nation will be secure, democratically mature, environmentally sustainable, self reliant with equal opportunities for and active participation by all, having social services, vibrant cultural and religious values and being a technologically driven middle-income economy.

So starts Vision 2020, written in 1998. Education is found under ‘Human resource development and management’. There are only two pages on education and only one on basic education. Section 7.2.2 is called ‘Improving education’. The relevant part of the ‘Strategic challenge’ reads:

The challenge to improving education is improving access, quality and equity in primary, secondary and tertiary education; ...

and some of the related ‘Strategic options’ are:

- (d) introducing free and compulsory secondary education;
  - (e) increasing the numbers of teachers and college tutors;
  - (f) providing more and better school facilities;
  - (g) providing adequate learning materials;
  - (h) introducing entrepreneurial subjects in curricula;
  - (n) providing students with adequate appropriate instructional materials;
  - (u) increasing the number of well trained teachers and reducing teacher - pupil ratios;
  - (v) and improving the production and distribution of learning materials;
- (Government of Malawi, 1998)

These three documents (PIF, EFA and Vision 2020) appear to be the significant policy documents guiding Malawian policy development and planning.

This chapter has focused on literature about *Malawian* education. Relevant literature from the wider field of *Sub-Saharan Africa* is found in chapter 3, to complete the literature review. The many questions that have arisen (at the end of many sections) are grouped at the end of Chapter 3 to form the [eight research variables](#).