

Chapter 6 Results

This chapter contains the results of the research. The first section describes the convenience sample of teachers used for the survey. This also establishes some background for the results that follow.

The remainder of the chapter is arranged around the eight variables. In each case the results are laid out in the following format:

- The official policies.
- A report of the discussions with relevant educators, providing historical and other background to the policies.
- The analysis of the quantitative survey data. This includes reporting of mismatches observed between what they say they do, want to do, and believe that policy expects of them. It also includes some relationships with the various explanatory variables (such as age, teaching experience, level taught, etc.) where they exist in the data. It should be noted that, because of the convenience sample, these results cannot be generalised further than the teachers who provided them.
- A descriptive report of the variable in relation to the lessons observed.
- Comments in the interviews by teachers, and later clarifications made by some teachers.
- A summary of the major findings for that variable.

Further analysis of the results, including interactions between policies and observed or reported practice are found in chapter 7.

6.1 Sample selected for the questionnaire

6.1.1 School sample

I surveyed ten schools in the rural areas around Domasi. The locations, descriptions and some photographs of the schools are in [Chapter 5](#).

6.1.2 Teacher sample

In all, 83 teachers responded to the survey. The 83 teachers have ages from 26 to 65, with females averaging 35.3 years and males 37.8 years. Of the 83, only 6 have ever been outside of Malawi, and one of these (Alippo Ussi) was selected for observation.

The numbers of years of teacher training are summarised in the table, with a mean of 1.9.

Years of training	1	2	3	4
Number of teachers	18	55	9	1

Table
6.1

This means that most teachers have been trained through MIITEP, the most recent attempt to deal with untrained teachers. For more on this, see [section 2.4.1](#).

The numbers in the sample of 83 teaching at each Standard is shown below. It only partially reflects the dramatically larger numbers at lower levels. The mean age of these teachers is also shown.

Standard	1	2	3	4	5	6	7	8	Total
Teachers	13	15	12	8	9	9	8	9	83
Mean age (years)	37.5	37.6	33	38.1	35.8	38.3	38.3	36.3	36.8

Table
6.2

There is no relationship to the level at which they teach.

However there is a strong relationship between teaching experience and level (correlation 0.63) with the least experienced teachers at Standard 3 and Standard 1 not far behind.

Standard	1	2	3	4	5	6	7	8	Total
Teachers' mean experience (years)	9.2	13.5	8.7	12.3	12.2	11.6	13.9	13.9	11.7

Table 6.3

There is also a strong relationship between the level taught and gender (correlation 0.63 again). The percentage of females teaching at each Standard is shown below.

Standard	1	2	3	4	5	6	7	8	Total
Percentage of female teachers	62	67	58	25	22	44	13	11	42

Table 6.4

Many more of the females, often with less experience, are given the lower level classes. This appears to be an unwritten staffing policy. It is clearly shown in the graph below; the higher the standard, the lower the percentage of female teachers.

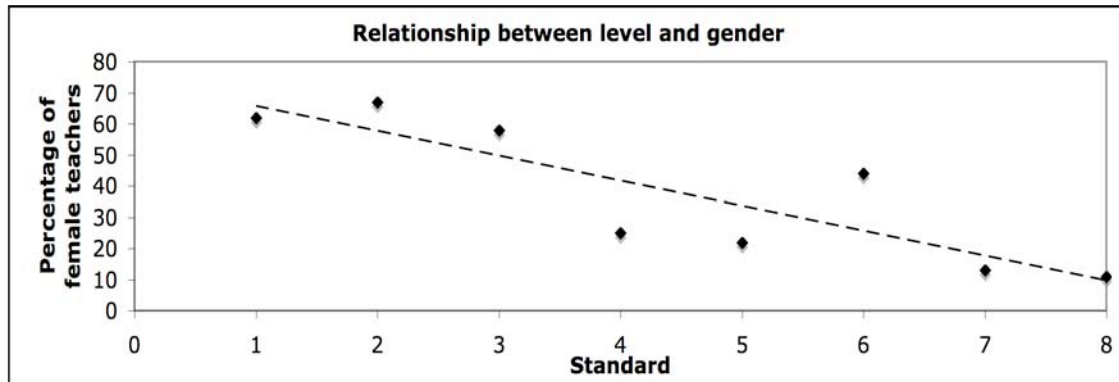


Fig 6.1

6.1.3 Class sample

The 83 teachers cared for 8356 pupils so the mean class size was 101. The smallest was 13, occurring at Standard 8, and the largest was 408 occurring at Standard 1. This implies that there might be a relationship between level and class size, and this was certainly the case. The actual class sizes of all 83 classes are shown below; all standard 8 classes are smaller than the smallest at Standard 1.

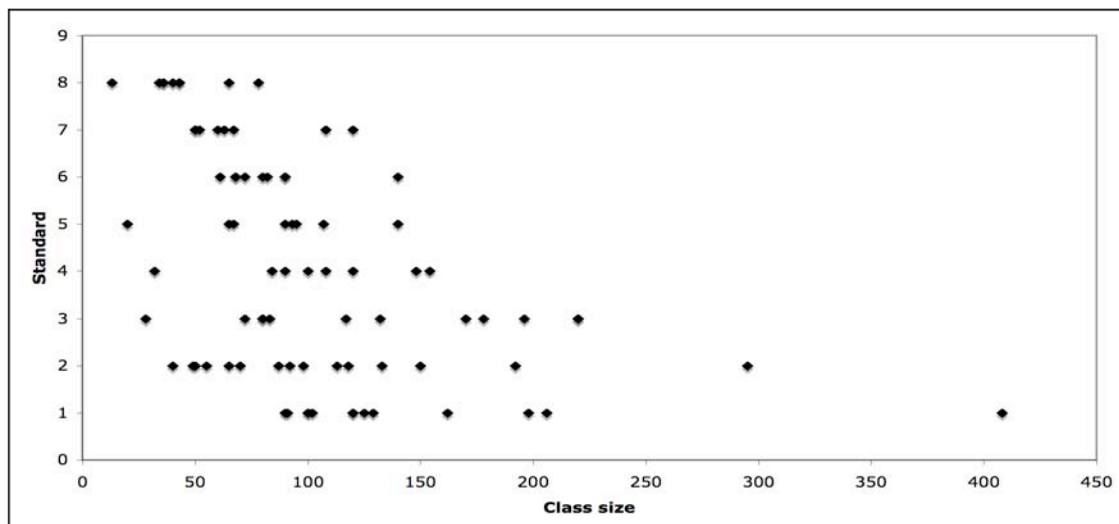


Fig 6.2

The table shows the mean class size at different levels, and also the minimum and maximum for each level.

Standard	1	2	3	4	5	6	7	8
Mean class size	150	107	131	105	85	83	71	43
Minimum size	90	40	28	32	20	61	52	13
Maximum size	408	295	220	148	140	140	120	78

Table 6.5

For Standards 1 to 5 the minimum was always at the same small, newly established school in a very rural area: Kanjedza Primary School.

The largest was a class of Standard 1 pupils (408). They were taught by a woman with two years of training and only two years teaching experience. The largest Standard 2 class (295) was at the same school, taught by a one-year trained female with 14 years experience. The smallest, a Standard 8 class at another school, was taught by a male with 9 years experience.

This implies that there might be a relationship between gender and class size. This appears to be the case, as shown by the mean for each gender and by the accompanying graph.

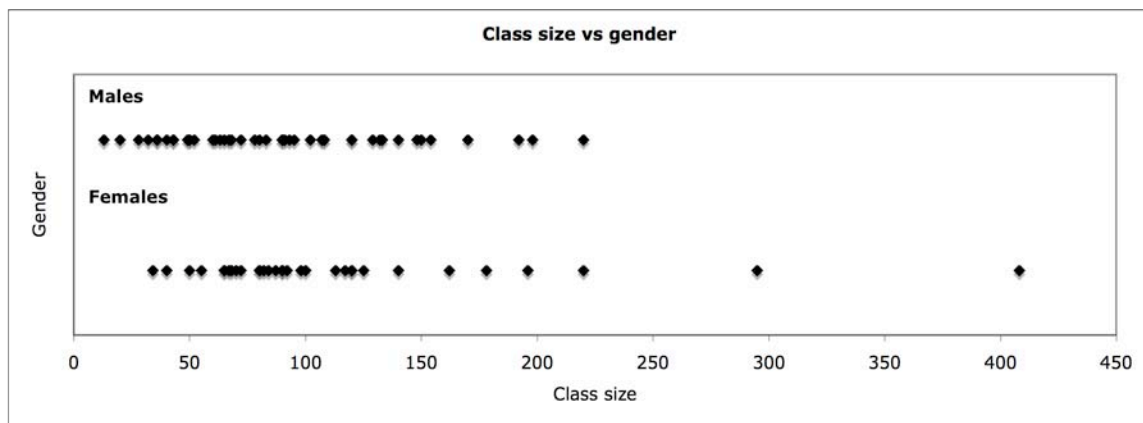


Fig 6.3

Teacher mean class size Female: 116 (range 34 to 408) Male: 91 (range 13 to 220)

Because the mean is unduly affected by the two outliers (298 and 408, both females), medians may provide a better comparison. Both are 90.

The three-way relationship between class size, gender of teacher and Standard taught is shown below.

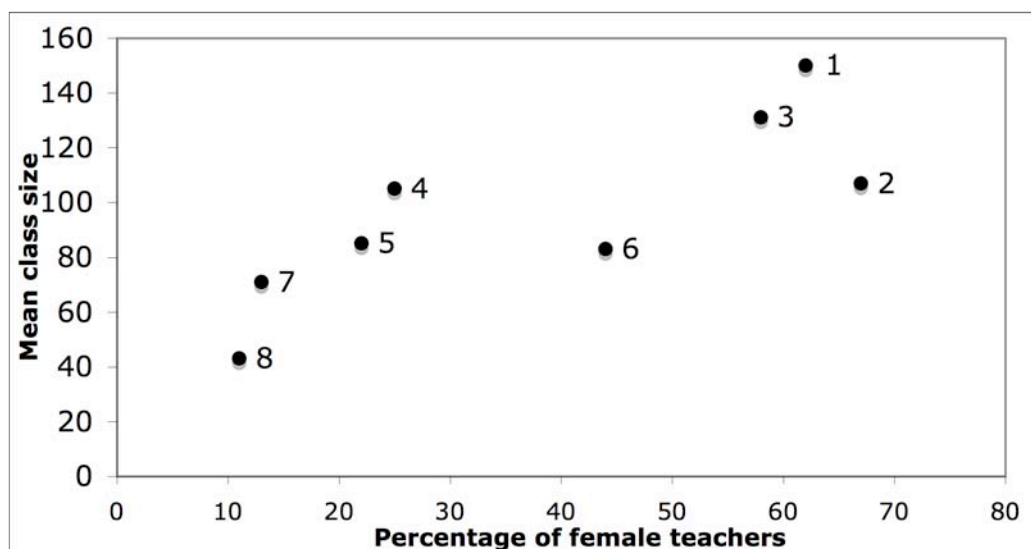
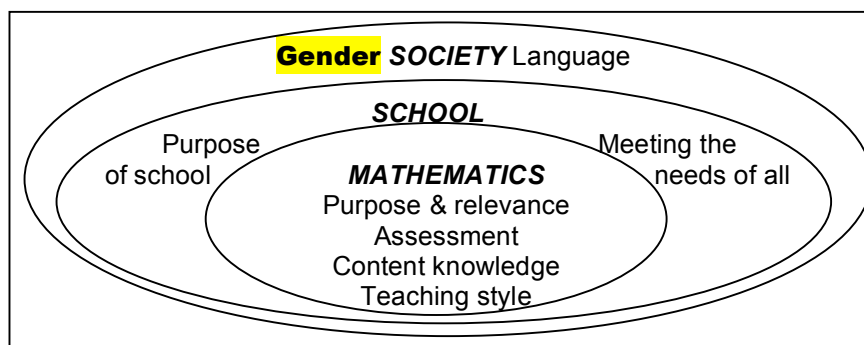


Fig 6,4

6.2 Gender



Gender issues are prominent in Malawian education because of the greater dropout rates for girls than boys. However looking for reasons behind these statistics is a far more challenging task.

6.2.1 Policy

The PIF (Government of Malawi, 2001) was the latest statement about gender and other policy when I visited Malawi in 2005. The Policy and Investment Framework includes these statements:

... The goal is to improve the participation of girls and women ...the intention is to increase female participation to at least 50% of the total national school enrolment.
(MoESC, 2001, section 1.5.4)

The primary education equity policies are clearly stated in PIF section 4.1.3 (a) #4.

4. Gender equity shall be promoted by making the school an environment supportive of the needs of both boys and girls. The target is increased and equitable participation of boys and girls in basic education.

Pregnancy is sometimes given as a reason that a girl drops out of school; see sections 2.2.3 to 2.2.6. with many articles reporting that Malawi once 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. However see 6.2.2 below.

Girls may drop out of school because of unwanted attentions from male students. There appears to be no written policy concerning this. Moleni (2004) describes the 'Code of Conduct' for teachers in which male teachers are explicitly forbidden to abuse girls; the consequence is loss of employment.

6.2.2 Interviews with educators

In an interview with Esme Kadzamira I was given a historical summary of the situation regarding gender policy in Malawi. She explained that, until the 1990s, the Malawi government had no policy regarding gender in education. She believed that their ideas of inequity were about the considerable regional differences across the country, and were probably politically motivated. However there was a growing body of research suggesting that there was a substantial problem to the disadvantage of girls.

Kadzamira explained that the GABLE project (described above in section 2.2.5) listed a range of projects, but only some of them specifically targeted girls. In her judgment, the Ministry of Education was 'not keen on those that targeted girls'. However as a consequence of GABLE the Ministries of Education and Gender linked up and the policies, particularly the fee waiver for girls only, raised awareness of the specific educational needs of girls. She reported that

there was a general confusion in the community about why only girls' schooling should be supported by a fee waiver and not boys' schooling.

She continued that the World Bank had been supporting a gradual reduction in school fees over some years, and that the general fee waiver for non-repeating girls was a substantial extra encouragement for families to send girls to school. However, in 1994 the newly elected democratic government saw political advantage in a fee waiver for both boys and girls. They had used that as part of their election platform, so on being elected they abolished school fees throughout primary system and consequently the system was over-loaded with pupils.

In an interview with Eve Chinguo, a member of the Gender Appropriate Curriculum Unit at MIE (the Malawi Institute of Education), I was told that there is a widespread cultural belief that girls 'cannot do well in mathematics and science'. As a consequence both parents and teachers discourage girls from attempting these subjects. This was supported in an interview with Mr Abraham Sineta, a District Education Officer for the Zomba education region (and former mathematics teacher): 'Girls don't like mathematics and teachers say it is difficult, which is discouraging.'

Eve Chinguo said that there is a policy that girls and boys should participate equally in schooling, but this does not occur. She believed that the problems start from the home, therefore there is a need to sensitise parents through meetings held at the local school level. The basic problems to be overcome, in her opinion, are the widely-held customs and beliefs about the roles of girls and women in society. She believed that urban parents were more aware of gender issues and that the greatest need for change is in the largely rural population.

She explained that teachers have been 'sensitised' about gender issues, and it is now up to PEAs (Primary Education Advisers) and school heads to monitor the changes, and make sure they happen.

The issue of sexual harassment of girls, either by male students or by male staff, was raised. Eve Chinguo explained that there is a policy [actually a "code of conduct for teachers", see above] such that 'if a teacher has molested a girl in his charge, he loses his job'. However she pointed out that this generally fails to be implemented.

No-one wants to report a teacher, for fear of reprisal, or for fear of losing a good teacher. In some cases they don't want to betray a friend. Instead, the teacher simply supports the girl and her child financially. (Chinguo, interview, 2005)

The related issue is the policy regarding a girl's right to return to school after giving birth. Dr Nyirenda, the Director of MIE in 2005, spoke with me about that, and other matters.

Very few girls will complete their education. We cannot prevent girls from becoming pregnant. ... The policy is that both the girl and the male who made her pregnant should be removed from school for one year and then allowed to return to school to complete their education. (Nyirenda, interview, 2005)

He explained that this policy has not 'gone down to the grassroots level'.

This is a communication problem. Some teachers and head teachers don't know the policy. Most of the parents don't know the policy.

Even when the girls know their rights, implementing the policy of returning to the same school falters because it is not what the girl wants.

The girls themselves, when they become pregnant, if they deliver and want to return to school, they don't like to go back to the same school. They don't want to be bullied and so forth. (Nyirenda, interview, 2005)

6.2.3 Survey results

The questionnaire sought to monitor three different views of the teachers:

- what they think that they actually do in their teaching;

- what they would like to do if it were possible; and
- what they think the Ministry of Education policy says in relation to the same matter.

Much has been written about the differential treatment of girls and boys in Malawian society, and how this is reflected in school, both in performance and outcomes. The three questions sought to identify teachers' views on this.

What teachers report that they do in relation to gender bias

The wording of the first question is given below, with the responses from 83 teachers.

When many pupils want your help, which pupils do you help first?

a	Treat both girls and boys the same.	98%
b	The boys.	1%
c	The girls, particularly if they are mothers.	1%

Almost everyone says they offer equal treatment to girls and boys.

What teachers reported they would like to do

The second question on the same issue asked what teachers would do if they had the opportunity. This was to find out if there were constraints that forced them to act differently from their beliefs.

When many pupils want your help, which pupils would you *like* to help first?

a	I would like to treat both girls and boys the same.	97%
b	I would like to help the boys.	0%
c	I would like to help the girls, particularly if they are mothers.	3%

This is the same pattern as the first question where teachers report about what they do.

What teachers think is policy

The third version of the question sought the ideas of teachers about the Ministry policy.

When many pupils want your help, which pupils does the Ministry want you to help first?

a	Treat both girls and boys the same.	92%
b	The boys.	1%
c	The girls, particularly if they are mothers.	7%

Compared to the first two questions on this topic, there are a few more teachers who seem to think the Ministry of Education wants them to favour girls. Most teachers think the policy is to treat sexes equally. Only two of 83 actually believe in favouring girls and only one claims to act that way.

6.2.4 What teachers were observed to do

At this point I will briefly describe the practice of each of the six observed teachers in terms of how they treated girls and boys. Through Mr Chirwa, about 12 months after my observations I submitted these printouts of these observations to the six observed teachers, so they could comment or correct my interpretations. Therefore for some points there is a *later clarification* from the observed teacher. However I have not altered my original observations.

At *Standards 1 and 2* Patricia taught with a mixture of exposition, calling for chorus responses and asking individuals. She also called for children to take part in 'demonstrations' at the front of the room. The numbers of boys and girls were very high, but approximately equal. It seemed that the girls were generally reticent to volunteer.

The daily lessons started with the portable blackboard being carried in, by three boys, from a nearby house. In the first class I observed (Standard 2), 10 boys were called for answers and 3 girls. This was the most unbalanced treatment that I observed. On the second and third days with the same class, only six children were chosen and they were four boys and two girls. For Standard 1, the numbers involved were 3 and 3 (on the first day), 5 boys and 3 girls (second day) and 3 boys and 1 girl on the third day.

Later clarification from Patricia (as translated by Grames Chirwa)

Patricia indicated that her apparently gender imbalances in using the pupils for 'demonstrations' in her lessons was a deliberate design. She says that boys have always been complaining to her that she has been favouring girls in answering questions and demonstrations. The boys have been telling her that she has been doing so because she is female herself. So when we came, she feared that if she balanced the number of boys and girls during her demonstrations, the boys would protest and perhaps more heavily than ever this time because the boys would have liked to show the visitors that she was favouring girls. So she used more boys than girls to appease the boys.

At *Standard 4* Mary had a class of 45 girls and 35 boys. She called 2 girls and 2 boys (alternately) to 'help her' to complete work on the board. For most of her lesson times children worked in large groups. I noticed that boys tended to do most of the active work (with materials provided) while most girls copied the blackboard notes into their books.

At *Standard 5* Alippo taught a class that was about equal in boys and girls. Monitors were all boys, and when children were selected for any purpose, the numbers favoured boys in the approximate ratio 2 : 1. One of her lessons involved group work, and the groups were of mixed sex. The group 'leaders' were evenly split in sex. However the boys did most of the actual measuring.

Later clarification from Alippo

I think this was done unknowingly. Usually my teaching involves both boys and girls. On that day, I think boys were just clever, there are permanent monitors of equal number, 4 boys and 4 girls, who always distribute materials in class. The ratio of boy and girls is always 2:2. It is a rule that a girl child should be involved in any activity being done anywhere.

At *Standard 7* Gift had a class with more boys than girls. (This seemed to become the case as we moved up every school.) His 'demonstrations' out the front involved three boys and one girl. He chose girls and boys evenly when asking questions.

At *Standard 7* Brenard had a class of 57 sitting three to a desk, often with a girl very tightly crammed between two large young men. His style was mainly lecturing with a few questions (often answered in chorus), but when he did ask a thought-provoking question he was often frustrated with the response. At one stage he observed: 'Only girls have their hands up. Why?' For this question he eventually asked a boy (in English) and the boy responded wrongly (in English). Instead of asking a girl to show the boy how to do it he chose another boy, who did it correctly. For one demonstration he used four boys and 2 girls, and for another only four boys. Brenard's only reaction to my observations was that I had 'observed correctly'.

At *Standard 7* Ralph had a class of about 50, but the numbers varied over the three days. There were mainly boys in the class, but Ralph tried actively to involve the girls who sat together towards the back. Despite this, on the first demonstration he chose four boys and one girl. Ralph used questions extensively and moved around the class, particularly towards the girls trying to get them to answer. Here Ralph is asking questions about ratio.



Photo
6.1

6.2.5 Interviews with observed teachers

I asked two teachers in depth about gender issues: Mary (Standard 4) and Ralph (Standard 7), who coincidentally were both at the same school. Again, I offer a verbatim comment from observed teachers, if they made them when offered the opportunity. However I have not altered any recorded comments.

Mary said that she treats both sexes the same, but in fact

... nowadays those who need maths help are the boys. Because the girls are so attentive, but the boys tend to be playful. I don't know why it happens. Even if we give tests, who comes first are the girls. (Mary, interview, 2005)

Later clarification from Mary

I was talking from my experience that for two years I have been teaching Standard 4, my observation was that boys needed encouragement and monitoring as they learn. This is so because they tend to misbehave.

Ralph, Standard 7 and head master

In the questionnaire only two teachers said they would like to help the girls. One was Ralph and this was one of the reasons he was chosen for observation and interview. I asked him why he has that view.

In many ways the girls are victims. When we come to Standard 1 there are more girls than boys. They do to Standard 2, 3, 4 many girls drop on the way, even up to standard 7, there are many drop outs. ... I feel the girls need special attention just to encourage them not to leave school, so that they can go to Standard 8 and finally to secondary school. As for boys they don't have problems. (Ralph, interview, 2005)

I asked about why girls leave school.

When we meet their friends they give reasons. Such a girl is pregnant, [another] just left school [because] her parents cannot afford to buy the uniform or to keep her at school. Sometimes boys have got some problems that can lead to dropping out of school. But we have more boys, we have several boys who can go to find some soap for themselves and use and come to school without problems. But as for girls if you don't have soap the only way is maybe to go with the boys or men so they can get money. As a result, they fail or they drop out from school. Boys can find on their own things that can be used at school. ... (Ralph, interview, 2005)

I asked whether girls' extra chores restrict their opportunities.

Girls have less time to study. For example after school you find a girl at home washing plates and drawing water, when a boy of the same age or at the same house is with his friends. They can play and they can talk about school, and this girl at home. Her only friend is a young child whom she is given to look after, after school. [At the same time] the boy is free, and staying with friends of his own size. In that way the boys improve and the girls do not.
(Ralph, interview, 2005)

I asked Ralph how as head teacher he could help the other teachers in his school to be more supportive of girls.

I think I can help them to show that the teachers need the girls to be at school in many ways. For example, when the teacher has heard something about a girl, what is happening at home, they have to sit down with the girls and talk to them. A few years ago we used to have to gather girls only with the lady teachers to talk to them. Nowadays I don't see this happening. That was one way of encouraging the girls. Maybe once a month lady teachers had to gather girls and talk [to] them [about] the goodness of school and show them role models. In that way I think they can be encouraged.
(Ralph, interview, 2005)

Later clarification from Ralph

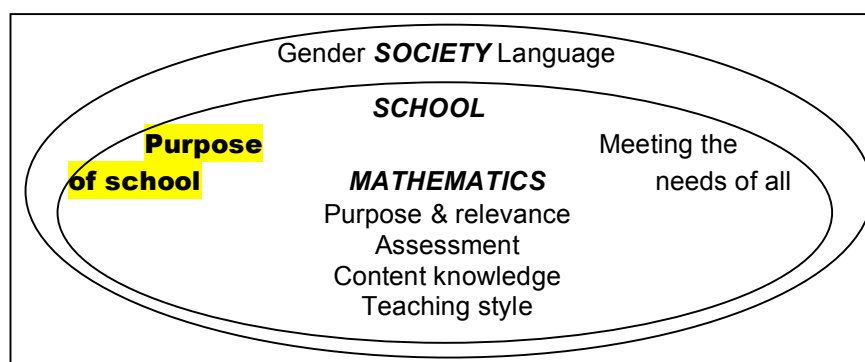
In lower classes (Standards 1-4) there is gender balance during examinations. As girls are many in these classes, it is very common to see all the three positions (1-3) taken by girls. While in upper classes (Standards 5-8), you may find only one position (out of 10) taken by a girl. In 1984, I taught Standard 8 in which out of 37, only one was a girl.

6.2.6 Summary of results on gender

Policy aims for gender equality or equal opportunity, and tries to curb the excessive abuse of girls. Policy has not attempted to compensate for the traditional structured disadvantage except in small ways, and thus seems to be having little effect on changing practice.

Teachers claim to provide equal opportunity within the classroom, but my observations did not support this. They seem powerless to modify the rapid rate at which girls drop out of school. Ralph offered some suggestions from his past practice, but in general the official 'sensitisation' of teachers to the needs of girls seems to have fallen on closed ears.

6.3 Purpose of primary education



This section tries to capture the views of teachers and educators on what primary education is for. If the actual purpose of schooling does not match what parents want from schooling, this might be a contributing factor to the dropout of pupils at upper primary levels. This matter is discussed in the issues section below.

6.3.1 Policy

So what does the Ministry of Education want for the purpose of primary education? The Malawian Government's Policy Implementation Framework (PIF) states that the purpose of the education system as a whole in Malawi is 'poverty alleviation' (MoESC, 2001, Executive summary).

As part of the Mission statement for Basic Education the PIF states that ‘Increased investment in education contributes to economic and social development.’

The purpose of primary education is to equip students with basic knowledge and skills to allow them to function as competent and productive citizens in a free society. The provision of primary education will be the main contribution of the education sector to poverty alleviation.
(MoESC, 2001, section 4)

The recently developed purposes of education are also expressed in more concrete terms in the extensive work that has gone into developing the new Primary Curriculum and Assessment Reform (PCAR). The purpose for primary education in PCAR documentation is the following statement.

The purpose of primary education shall be to promote the overall development of all learners so that each becomes literate, numerate, and has a basic understanding of science and technology, is responsible, morally sound and a productive citizen in a democratic society, who is also equipped with skills, values and attitudes to survive economically and socially and has a desire for life long learning.
(MoEST, 2004)

It is interesting to contemplate the differences between this statement (expressed as a set of desirable outcomes) and the purpose from the PIF, given above (expressed as a short task description). In neither case is the relationship to ‘poverty alleviation’ very clear.

The PIF document makes an attempt at linking education to national development, but this is rather vague and does not link to ‘poverty alleviation’ specifically. See section 2.5.1 for more on this.

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. The education of parents, especially mothers, has been shown to affect the cognitive, affective and physical development of the child. In addition, the expansion of scientific knowledge and technologies that is necessary for development depend on education.
(MoESC, 2001, section 1.2.1)

There is strong support for examinations from the Malawian Government. The current future-planning document (Vision 2020) clearly supports continuance of examinations as a driving force in the education system. The first four of the seven goals for ‘improving Support Institutions in the Education Sector’ are

- (a) strengthening the management of examinations and of examination bodies;
 - (b) reviewing assessment procedures;
 - (c) enhancing security of examinations;
 - (d) ensuring fairness and transparency in the selection process;
- (Government of Malawi, 1998, section 7.2.2.2)

It would seem possible that the examination and selection system is performing the function of stratifying society, but this is something that the government does not wish to happen.

... the PIF stresses the need for ensuring that Malawi's education system does not intensify existing inequalities across social groups and regions.
(MoESC, 2001, Executive summary)

Each of the 1991 Primary school syllabuses begins with a Foreword explaining the goals.

Bearing in mind that primary education is terminal for the majority of the children, there should be greater emphasis on those practical skills that would enable them [to] enter self-employment and entrepreneurship and those skills that relate to the socio-economic development of the country.
(MoEC, 1991, p. i)

In the National Goals of Education in Malawi (MoESC, 1991, p. iii) there is a listing of five skill categories: citizenship, ethical and socio-cultural, economic, occupational and practical. Each is elaborated, but none specifically mentions numeracy or mathematics. The National

Primary Education Objectives (MoEC, 1991, p. iv) include only one mathematically-related statement, out of 31 in all. It reads ‘apply mathematical skills in everyday life’.

6.3.2 Interviews with educators

Mr Ndalama worked at MIE as a policy advisor in the department of research and policy studies. I specifically asked him about the purpose of primary education.

Primary school education is equipping children to have skills and knowledge that will enable them to go along with their education post primary and should they drop out they should be able to lead a meaningful life in their society.
(Ndalama, interview, 2005)

He explained that this means that everyone should become at least literate and numerate. To achieve this in the new curriculum (PCAR, see section 7.5.2), the highest proportion of time is given to literacy in the vernacular and the second to numeracy.

I asked Mr Kaambankadzanja (from MIE, who is in charge of the curriculum revision process: PCAR) about why so many pupils drop out of school before completing primary level.

There are so many reasons. Mostly it comes from poverty because most of them just go to school without having any meal, especially for the infant classes, so they can’t concentrate. So going to school is like punishment. They have no money to buy anything.

He referred to the need for adult compulsion to make sure children attend school.

Another problem is the high number of orphans. Many children just stay with relatives, distant relatives who have no regard for school, so they are not motivated or forced to go to school. For us – we had to go to school and we realise the benefits later.

Yet another problem arises from the shortage of teachers. Mr Kaambankadzanja continued:

This is what I heard from all the chiefs in Zomba, who had a meeting last December. Zomba was rating very high on drop out. So many children were out of school. One of the main factors was that children in school just play. Teachers are not teaching them. They have walked long distances to school, they play all day and do not attend classes. The teachers don’t even care, and this is very common. So the children say, why should we go to school – we can play better at home. The chiefs said, Can you check that your teachers are teaching.

When there are only a few teachers they give most attention to upper levels.

Sometimes there are only three teachers but eight classrooms. There are so few teachers that they say, well for today I will teach this class, another day another class. They give attention to Standard 7 and 8, the examination classes. The children get frustrated.

The influence of ‘rites of passage’ also was offered as a reason. These initiation rites are part of Yao culture.

Within the school year we have this gap, where someone goes through a transformation in his or her life. After that he has to go to the same class and sit with the same kids. No, he says, I have gone through initiation, I am an adult, I have gone through initiation, these are not my friends any more. This happens around age 11 or 12, which is Standard 3 or 4.
(Kaambankadzanja, interview, 2005)

This leads to drop out, and is exacerbated because of the mixed gender classes in most schools.

6.3.3 Survey results

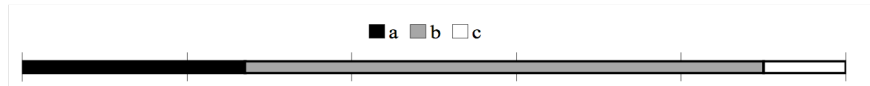
In constructing the choices in the questions I summarised three alternative views: transmission and preservation of Malawian culture, preparation for later life (with the nature of that later life remaining open ended), and preparation for the selection examination into secondary education.

What teachers report as the major purpose in primary education in their practice

The actual wording of the question on the questionnaire is given below, with the responses from 83 teachers.

At present, what is the main role of primary schools?

- | | | |
|---|--|-----|
| a | To produce citizens with a good knowledge of Malawian culture. | 27% |
| b | To help pupils learn what they need for later life. | 63% |
| c | To prepare pupils for the Standard 8 examination. | 10% |

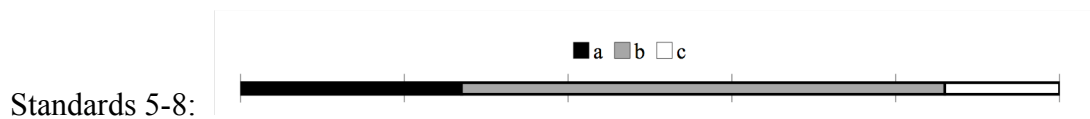
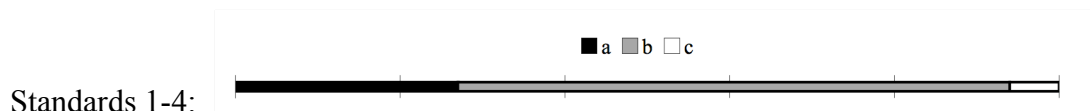


This shows a clear preference for preparation for life, and not examinations. However there is evidence of some concern with cultural transmission. There is little difference between teachers in lower and upper levels.

At present, what is the main role of primary schools?

Std 1 – 4 Std 5 – 8

- | | | | |
|---|--|-----|-----|
| a | To produce citizens with a good knowledge of Malawian culture. | 27% | 27% |
| b | To help pupils learn what they need for later life. | 67% | 59% |
| c | To prepare pupils for the Standard 8 examination. | 6% | 14% |



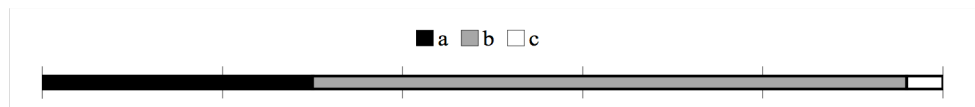
‘Life preparation’ is a clear focus at both levels, although with a little more emphasis on examination preparation at upper levels. The 17 teachers at Standards 7 and 8 were almost evenly split over the three purposes; for them there was no longer a clear focus on life preparation. As we see below, this is consistent with the classroom observations.

What teachers would like to be the main purpose of primary schooling

The actual wording of the question on the questionnaire is given below, with the responses from 83 teachers.

At present, what should be the main role of primary schools?

- | | | |
|---|--|-----|
| a | To produce citizens with a good knowledge of Malawian culture. | 30% |
| b | To help pupils learn what they need for later life. | 66% |
| c | To prepare pupils for the Standard 8 examination. | 4% |



The results are roughly the same as before, but with even less emphasis on the examinations.

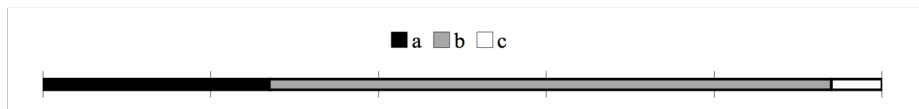
What teachers think is policy

The questionnaire wording is given below, with the responses from 83 teachers.

At present, what does the Ministry want be the main role of primary schools?

- | | | |
|---|--|-----|
| a | To produce citizens with a good knowledge of Malawian culture. | 27% |
|---|--|-----|

- | | | |
|---|---|-----|
| b | To help pupils learn what they need for later life. | 67% |
| c | To prepare pupils for the Standard 8 examination. | 6% |



Again the results are consistent, and most teachers believe that they are doing what the Ministry wants.

6.3.4 What teachers were observed to do

The content curriculum as part of the purpose

Given that I deliberately observed only mathematics lessons, part of the purpose of education can be seen as reflected in the topics taught. The issue of relevance of the mathematics being taught is further addressed in section [6.6](#).

The teachers I observed at *Standards 1, 2 and 4* were clearly preparing students in calculating skills, and these had the dual outcomes of life preparation and examinations. This is quite consistent with the generally held statements about what teachers at this level do.

Two teachers at *Standards 5 and 7* seem also to have this dual purpose in mind. The topics they taught in my presence were drawing circles, measuring and multiplication of money (Standard 5), averages, budgeting and Roman numerals (Standard 7). Although there was little explicit link made during the teaching to applications in life outside school, most of these topics can make the claim to be life preparation – the obvious exception being Roman numerals.

In *Standard 7* I observed two teachers clearly preparing students for examinations. Brenard taught multiplication and division of fractions, averages and addition and division of decimal numbers – and did so in a way that was clearly designed to help students address these types of questions in examinations. The topic of averages was not related to any uses of averages outside school.

Ralph also taught a topic that was on the examination syllabus, with little link to its applications. He spent three lessons on the same topic: sharing a total by a given ratio. In this demonstration he linked the concept to the way food is shared in a Malawian home – where the older people get the larger shares, but the focus was largely on getting a routine learned and memorised for the examination.

The hidden curriculum as part of the purpose

There is a considerable ‘hidden curriculum’ that is also part of the purpose of education. Functions such as socialisation, learning to follow directions, learning to take personal responsibility for study etc. are likely to be taking place. Although this might be expected to be of particular importance in Standards 1 and 2, Patricia included little of this in her teaching. The recording reveals a high level of time on task (at least by the teacher if not the class), with little time taken on class management. Her (translated) remarks to pupils that capture some of this are reported below. This is the first of the three days on which I observed her.

Patricia started the day by lining up those pupils who had already arrived (only a small fraction of the total) and singing songs about hygiene (We wash our hands, comb our hair, clean our teeth, etc.). (See photo.)



Photo
6.2

Then the children marched into class. The lessons can be summarised as an endless series of statements and questions, with chorus responses or individual responses varied to keep the attention of the children. These are some sample remarks.

Standard 2: There are 113 pupils.

- This is the time for mathematics, thank you very much.
- I don't want you to be answering as a class. Anybody who has an answer I would like that one to put up their hand and not answer as a class. (This was rarely practised; most questions were answered as a class 'in chorus'.)
- Hide your work so others cannot harvest where they did not sow.
- If any of you has a question please raise up your hand and say what problem you have. (No waiting for responses.) What kind of mathematics were we doing today?

Standard 1: This class is noticeably noisier than Standard 2; there are 130 pupils. The lesson stated by children writing digits in the sand in the playground.

- Make sure that you don't show what you are writing, because your friends might simply copy what you are writing so hide it, don't show it to anybody.
- Which hand are you using? Are you left-handed?
- You are taking your time. I will not give you sweets if you do not write '0' to '10'.
- Have you seen how your friend has written 'zero'? Is he right? Clap hands for him.
- Can you stand up and write a correct number 6 on the board? (After a girl has said that another girl is not correct; she had written a mirror image.)
- We are repeating writing these numbers because we are getting ready for exams. That is why we are repeating.
- Concentrate on what we are doing here. Don't look outside.
- Now let's be quiet. (The recording reveals a constant level of chatter, unaffected by this remark.)
- Do any of you have any questions?
- Can we have our last game in this mathematics lesson?
- Your friends are saying that is not number 8. Show your friends number 1.
- The lesson finished with Patricia leading the class in the song 'Masamu' (Mathematics):
'Mathematics, mathematics is good, I will not stop learning mathematics, mathematics is good.'

6.3.5 Interviews with observed teachers

I asked Brenard what was the main reason that pupils have to learn the material he teaches to Standard 7. His response:

Especially in maths we teach in order for them to get higher marks during exams, and also to continue their education, so they can go to secondary education.
(Brenard, interview, 2005)

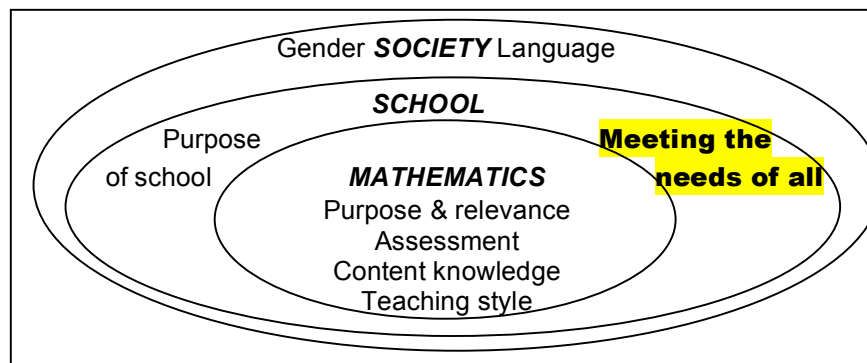
I asked how many students he had selected in the previous year. He told me that 11 out of 43 who sat the examination were selected for secondary school but others also passed, but that they were not good enough for selection into a government secondary school. The majority who were not selected for government secondary schools looked for private secondary schools. He believed that the main reason for the existence of Standards 7 and 8 was selection for secondary education. I asked why secondary education was important. He explained that getting employment (and hence income) was the major goal.

6.3.6 Summary of results on purpose of primary education

The policy in this area appears confused. ‘Poverty alleviation’ is the major overall objective of education, but the more specific the education becomes the less relationship there seems to be to poverty alleviation. Policy is also concerned with ‘fairness’ in selection examinations, preventing cheating etc.

The statement of purpose for primary schools strongly supports ‘practical skills’. This aligns well with ‘poverty alleviation’, and the fact that about two-thirds of the teachers chose ‘To help pupils learn what they need for later life’ seems to support this. Teachers generally want to do this, and believe it is what the Ministry wants. The exam-orientated goal is not generally supported, except by teachers such as Brenard. In [section 6.6](#) the mathematics curriculum is examined for consistency with this goal.

6.4 Meeting the needs of all pupils



Management of very large classes is a significant challenge. On the surface ‘meeting the needs of all pupils’ is a question of how the teacher does, or does not, help those pupils who get behind the rest of the class. Behind that is a much wider issue involving helping all individuals in the context of very large classes.

An even wider view of ‘meeting the needs of all pupils’ is to consider why pupils drop out and finding ways of lowering the dropout rate. This turns out to be a very complex problem, made even more so because solving it would increase the class sizes dramatically at all levels above Standard 1 – and that would create even more problems for over-crowded schools and over-worked teachers!

The widest view of ‘meeting the needs of *all* pupils’ is to look at the needs of those who have left the formal system, because the government still has responsibility for them. Non-formal

education programs are just beginning in Malawi; because of a great need they can be expected to have a significant future.

6.4.1 Policy

The Policy and Investment Framework (MoESC, 2001) produced by the Ministry of Education, Sports & Culture has many policies related to this area. In many cases the PIF document provides targets (or a wish-list) but very little actual suggestion as to how these might be met. Presumably the methods were to be worked out over time.

Policies relating the diversity in the classroom

Those relating to the diversity of pupils in every classroom deal with Class age range, Special needs and Gender equity.

- 4.1.2 #5. Minimum entry into primary education shall be 6 years of age while the maximum age of entry shall be 11 years. Average age range in a class will reduce from 10+ years to 5 years.
- 4.1.3a #1. Government shall provide an enabling environment for children with special educational needs and for the underprivileged within the conventional school system.
- 4.1.3a #3. Special needs education shall be afforded a priority status with the aim of getting a higher number of pupils with special education needs to complete the primary education cycle.
- 4.1.3b #2. The MoES&C will coordinate a social mobilization campaign targeting socially disadvantaged groups, which will aim to boost the participation of out-of-school youth, girls, orphans (especially those whose parents have died of HIV/AIDS) and children with physical and learning difficulties.
- 4.1.3b #3. Children with mild disabilities will be taught in regular schools, supported by teachers with specific training in special education.

Gender equity policies also related to diversity in the classroom. The policy deals with equity of access.

- 4.1.3a #4. Gender equity shall be promoted by making the school an environment supportive of the needs of both boys and girls. The target is increased and equitable participation of boys and girls in basic education. The MoES&C shall put in place appropriate measures to enhance the participation of girls in basic education. The proportion of female pupils enrolled rises from 48% in 1998 to 50% in 2002.

Policies involving repetition also affect the age range.

- 4.1.8b #2. Internal efficiency will be improved by repetition and drop out rates being systematically reduced. Efforts will be made to ensure that the strategies utilised to bring about these reductions will not compromise the access that pupils have to education, nor the quality of that education.
- 4.1.4a #4. The MoES&C shall put in place appropriate measures to reduce pupil repetition Repetition rate shall decrease from an average of 15% to 5% in standards 1-7 and to 10% in standard 8.

Policies to reduce pupil drop out

It is acknowledged that pupil absenteeism causes pupils to get behind and therefore fail examinations.

- 4.1.4a #5. The MoES&C shall investigate and tackle the main causes of chronic pupil absenteeism in primary schools and will develop and introduce collaborative strategies and measures such as community sensitisation to address the situation. The intention is to increase the daily attendance/enrolment ratio from 60% in 1999 to 80% in 2002 and to 100% in 2007.

Dropout rates are provided with a target.

- 4.1.4a #4. The MoES&C shall put in place appropriate measures to reduce pupil repetition and early school withdrawal. ... Dropout rate shall reduce to 5% in all standards during the plan period.

The cost of schooling is a significant factor for the rural poor. Even total removal of school fees is not enough. Therefore there is a general objective regarding cost reduction.

Objective 9

Finally, the PIF recognizes that the proposed changes are unlikely to be achieved with the current level of funding from Government ... 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. The PIF recognizes the roles that communities and the private sector can play in the development of education and proposes strategies that will encourage an increase in private investment in the sector. ...

Policies to improve teaching

The PIF clearly recognises the key roles of teachers in the educational enterprise. The urgency of teacher supply is recognised in these statements.

- 4.1.6a #2. The system of teacher recruitment and deployment shall be rationalised and decentralised so as to respond to the actual needs of pupils, schools and communities. Districts shall assume the responsibility of recruitment and deployment by 2002.
- 4.1.6b #5. Teacher recruitment and posting policy will be reviewed so teachers are more efficiently recruited and deployed.
- 4.1.6b #6. Primary school teacher recruitment and deployment will acknowledge the scale of teacher attrition due to a variety of factors including the HIV/AIDS pandemic.

Teacher quality is recognised as a factor in undermining the recognition of the importance of education by the community.

- 3.3.2 Emerging evidence suggests that an additional and worrying challenge is that even where educational resources are made available and accessible, education of the youth is not fully valued by some communities. This is demonstrated by low attendance in schools, which are relatively well resourced. Quality and relevance of the education on offer contribute to this, and therefore there is much to be done on the part of the Government and the community themselves to enhance the perception of the benefits of education, and to overcome the very real barriers to uninterrupted attendance that pupils in the most deprived circumstances face.

Teacher quality is to be developed firstly in initial training (before or after teaching has begun) and then on a continuing basis for the remainder of the teacher's career.

- 4.2.4a #4. Beginning 2000, the minimum entry qualification for primary school teacher trainee shall be raised to MSCE and the current untrained teachers who are JCE holders shall be afforded an opportunity to upgrade their academic qualifications and to take advantage of the available training opportunities.
- 4.2.4a #5. From 2000, potential primary teacher trainees will be required to have credit passes in Mathematics, English, one natural science and one social science.
- 4.2.4a #1. The MoES&C shall put in place a quality teacher education and development program for all teachers in the system. The percentage of unqualified teachers shall reduce from the estimated 50% in 1997 to 30% in 2002 and to 10% by 2012.
- 4.2.4a #9. The MoES&C shall provide a quality, integrated INSET program for primary school staff. All staff to have at least 3 days of INSET per year.

Provision of learning materials, both supply and distribution, has been a problem and overcoming it will contribute to improvement in pedagogy.

- 4.1.4a #11. The MoES&C shall improve the distribution of school materials and supplies. It is hoped that by 2002 the distribution of these materials will have improved such that all pupils will be supplied with exercise books and writing materials.
- 4.1.4b #6. Strategies to improve the supply and distribution of school materials and teaching/learning resources, such as the decentralisation of distribution will be developed and introduced. Such strategies will endeavor to target the most poorly resourced schools.
- 4.1.4b #7. The MoES&C will develop and enforce systems and procedures, which will lead to more efficient use, and functional life of instructional materials.

The PIF recognises that relevance of curriculum is an important contributor towards achieving its goals.

- 3.4.1 In addition to the provision of relevant physical and human resources, the quality of education provided by Malawi's educational institutions should be enhanced by a thoroughly revised curriculum. The challenge is to design a school curriculum which de-emphasizes selection for post-primary education. Instead, the focus should be on the more than 90% of the primary and secondary school graduates who have to seek employment in the private and informal sectors. In this connection, the primary and secondary school curriculum of the future should strive to impart essential skills and knowledge on a broad range of issues including new basic skills; critical thinking and analytical skills, civic and democratic values, computer skills, entrepreneurial skills, life skills and environmental education. The teaching of science and mathematics will also deserve more attention in the re-oriented curriculum.
- 4.1.5a #1 The MoES&C shall through the MIE be responsible for the development, implementation and monitoring of a basic national curriculum, which addresses both the academic and non-academic needs of pupils. The primary school curriculum will be revised by 2002.

Policies to assist those who have dropped out of school

The PIF mentions 'out-of school youth' in this policy, but no other mention is made.

- 4.1.3b #2. The MoES&C will coordinate a social mobilization campaign targeting socially disadvantaged groups, which will aim to boost the participation of out-of-school youth, girls, orphans (especially those whose parents have died of HIV/AIDS) and children with physical and learning difficulties.

It is not exactly clear what is meant by a 'social mobilization campaign', or how its success may be evaluated.

6.4.2 Interviews with educators

The educator interviews covered many aspects of policy and practice related to this topic. I have split them into topics for ease of understanding the material.

Individual differences

Mr Kaambankadzanza is in charge of the implementation of the new primary curriculum (PCAR). I raised the issue of differential teaching in the context of outcome-based education with him. I am not sure he had realised it before.

Those different levels in the same class – and look if there are 10 in the class its OK, but when you think of 100 – yeah, that's the biggest challenge – to teach a large class with all these variations. (Kaambankadzanza, interview, 2005)

I suggested the Australian solution – use of different books and other resources, different levels of materials for three different groups in the same class.

This obviously cannot work in Malawi. One reason is that book production is too expensive for Malawi, even for donors. In Malawi at present we cannot manage one text book for each pupil.

What we can do is have the classes work in groups. The teacher takes one group in the teaching corner, while the others are given assignments. You put those who are faster at one group ... yeah! Those who are ahead can be given more challenging work, so they can proceed, while those who are behind they are given remedial work...

(Kaambankadzanza, interview, 2005)

The last paragraph represents a reasonable description of the Malawi Breakthrough To Literacy program (MBTL). It seemed to me that during my interview he was thinking aloud on this topic, and realising some of the challenges of the future 'outcome-based education' for the first time.

Coping with the range in the classroom

While none of the teachers interviewed showed an awareness of the range in their classrooms, or felt any obligation to deal with individual differences, Dr Susuwele-Banda (from MIE) showed a considerable awareness of the range and mixture in any class.

Mixed ability is almost everywhere. ... If you are in a position where you appreciate that a student experiences difficulties in learning because of their abilities, that is a critical point to bear in mind. You

must appreciate that you are grappling with this range of abilities.
(Susuwele-Banda, interview, 2005)

He discussed the implications for teachers' lesson preparation.

If I have to give tasks, I must include tasks that will try to challenge those that I feel that are much better in this, and I should also have something that gives confidence and to move on to those who have problems. That is very important, and you go to your class and you think 'I think I don't know what to do with this class because of this range'. But the fact that you have different tasks at different levels that helps you to challenge the learners at that particular time. They are all engaged and that is very important. That is the challenge for the teachers.
(Susuwele-Banda, interview, 2005)

He admitted that there was going to be a significant challenge in trying to persuade teachers to use Continuous Assessment. This will be discussed further in section 7.7.7. It would seem that most Malawi educators and teachers are not yet ready to cope with differences in the classroom. It will be interesting to see whether outcomes-based education serves to make them more aware of this.

Why pupils drop out of school

The dropout rates are discussed in [section 2.2.6](#). Mr Kaambankadzanja offered many reasons for the high dropout rates. Poverty and hunger (leading to poor concentration) head his list.

Most of them they just go to school without having any meal and especially for the infant classes, so going to school is like punishment. They go without anything to bite. They can't have money to buy anything. The projects which are trying feeding ... school feeding [paid for by donors] is being tried in some places.
(Kaambankadzanja, interview, 2005)

Other reasons on his list included the high number of orphans (due to AIDS) who are living with relatives who don't force them to go to school.

Many children are just staying with distant relatives who have no regard for school. So they are not motivated, they are not forced. For us we had to go to school, we can't stay home. We realise the benefits later. Without someone who has a passion they won't go.
(Kaambankadzanja, interview, 2005)

Also on his list was the poor quality of teaching, and the many classes without teachers.

Children in school just play. Teachers are not teaching them. They have come, they have walked long distances to school, they play for the whole day, they do not attend classes, the teachers don't even care, and this is very common. So children say 'Why should we waste our time, we can play better at home'.
(Kaambankadzanja, interview, 2005)

In the section on gender ([6.2.2](#)) I have reported an interview with Eve Chinguo including reasons that girls drop out of school. The pressures on girls to stay at home are far greater than those on boys, in whom the family might be prepared to invest money and time in the hope of an educated son who will provide income. There is also systematic gender bias, community expectations, cultural traditions, sexual harassment, marriage, pregnancy and many more reasons that girls might drop out of school at a greater rate than boys.

Helping those who drop out of school – non-formal education

Mr Ndalama pointed out that there are programs for adults. There are Adult Education Centres he described as not successful as 'being community based, they depend on the enthusiasm of individuals.' There are clubs for youth who have left school, but 'most of these programs are concerned with fighting HIV/AIDS and all these other things'.

One highly successful non-formal program is run by MacBain Mkandawire, a former teacher from Domasi College. It is totally outside the Ministry of Education, although it attempts to influence government policy and practice by means of advocacy with parliamentary committees and ministerial officials.

Mr Mkandawire heads an organization called Youth Net and Counselling (YONECO). He and his team of workers, many of whom are volunteers, work with vulnerable groups in the

community in capacity building, community mobilisation and life skills development. His programs manager Lilian Chigona explained that much of their work for the last three years has dealt with gender issues, as they work to support teenage girls. Some of these girls are in school, but many have dropped out either due to pregnancy or much earlier for other reasons. All of them are in need of personal empowerment so they can make more of their lives. As a consequence most of these efforts are aimed at reducing the loss of life through HIV/AIDS.

Mr Mkandawire told me about their advocacy work towards functional literacy with teen mothers who are ‘too old to go into Standard 2 but too young to be mothers’. By Standard 4 or 5 half the children have dropped out of school. ‘When they drop out they get to be child labourers.’ YONECO are also working to educate domestic child labourers and child prostitutes, many of whom are in these fields as the only source of cash income for their very poor families. While I was there they were trying to work out a suitable ‘curriculum’ for these girls.

Numeracy is there. There are life skills, home management, literacy... This curriculum should help these girls realise the importance of education, develop the necessary skills and make informed decisions as to whether they should continue as child labourers or they should leave and do something and continue with school.

(Mkandawire, interview, 2005)

I asked him what was the main value that out-of-school children might get from practical numeracy.

At the end of the day we need an education that will transform people, not just inform them. ... In mathematics education we should link maths to their reasoning capacity, transforming people – people have to think. For now children have stopped thinking; they want to be given information and regurgitate it.

6.4.3 Survey results

What teachers report they do to meet the needs of all

These two questions were included because of the fact that the class management approach of the teacher is at least one of the factors that determines whether the pupils stay on at school. The first question is about teacher-pupil relationships, in the area of class management, or discipline. The questionnaire wording is given below, with the responses from 77 teachers.

Which of these best says what you do at present while teaching mathematics?

a	I punish pupils who do not work hard.	26%
b	I demand respect from the pupils.	17%
c	I try to earn the respect of the pupils.	57%



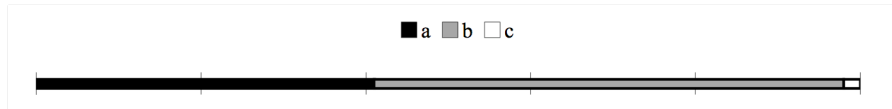
The majority of teachers claim they ‘try to earn the respect of the pupils’ but there are still a quarter of them who say they resort to punishment. Those who punish pupils were equally spread across all Standards and were disproportionately female: 55% were women, but in the total sample only 42% were women.

The second question is concerned with helping individuals. The actual wording is given below, with the responses from 83 teachers.

**In any class some pupils are absent more often, or are slower to learn than others.
How do you help the pupils who get behind?**

a	I give help to slower pupils out of class time.	41%
b	I organise catch-up groups in class time.	57%

c I do not give any extra help. 2%

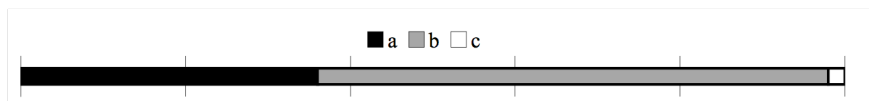


The most common option is using class time to give extra help, although a significant percentage also give help after school. There is a considerable difference between those at lower levels and upper levels, with class time by far the most popular option at lower levels and out-of-class help more common at upper levels.

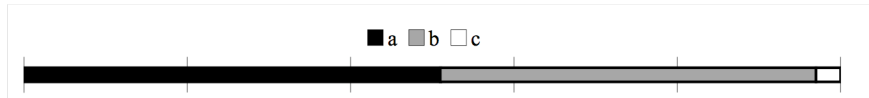
In any class some pupils are absent more often, or are slower to learn than others.

How do you help the pupils who get behind?		Std 1-4	Std 5-8
a	I give help to slower pupils out of class time.	36%	51%
b	I organise catch-up groups in class time.	62%	46%
c	I do not give any extra help.	2%	3%

Standards 1-4:



Standards 5-8:



What teachers would like to do to meet the needs of all

The actual wording of both questions from the questionnaire is given below, with the responses from 83 teachers.

Which of these best says what you would *like* to do in the future while teaching mathematics?

a	I would like to punish pupils who do not work hard.	29%
b	I would like to demand respect from the pupils.	17%
c	I would like to earn the respect of the pupils.	54%



Both patterns are similar to the pattern above, so teachers seem generally to be able to do what they believe is right. The gender and level differences biases are repeated.

In any class some pupils are absent more often, or are slower to learn than others.

How would you *like* to help the pupils who get behind?

a	I would like to give help to slower pupils out of class time.	46%
b	I would like to organise catch-up groups in class time.	52%
c	I do not want to give any extra help to pupils.	2%



6.4.4 What teachers were observed to do

The first question reported above deals more with approaches to management. However management issues were not likely to arise in the unusual event of a white man observing the class in action; in fact all classes were very well behaved. So the observations deal with other

aspects of pedagogy. Regarding the second question, since I only observed teaching in class time, I was unable to determine whether or not help was being given to pupils out of class time.

At *Standards 1 and 2*, Patricia had no class-time at all to help individuals. Her observed lessons included children who responded on the board, such as a child who wrote the digit 9 'in reverse'. Her method of 'helping' was to get someone else to do it correctly to show the child (and the class) the correct answer. I could not tell whether or not the child was helped by this process. Sometimes pupils did work in their exercise books. She moved around correcting, but rarely paused to give more than encouragement. Incorrect responses simply received a cross. In this photo, she has Standard 1 pupils drawing numerals in the sand.



Photo
6.3

At *Standard 4* Mary made extensive use of group work where the children helped each other. This freed her to move around helping individuals or passing information to group leaders. It seemed she knew how each child was coping with the class work being tackled.

At *Standard 5* Alippo demonstrated a range of styles. Most of her teaching time was teacher-dominated talk, but she did include some individual work (e.g. use of string to draw circles in books) during which she helped individuals. Her group work lessons involved pupils moving around to measure, so she was unable to use that time for individual help. Here is one of Alippo's groups at work.

Later clarification from Alippo

Of course it was when pupils did not understand the concept, I needed to repeat now and then, explain to them in English and then translate to them in Chichewa so really it seemed so.

When pupils work in groups, I just go there to see if they are following the instructions and assist accordingly. Usually, it is the work of the group leaders and the fast learners to help some pupils understand well when they are helped by a friend.



Photo
6.4

At *Standard 6*, Gift was similar to Alippo, dominating the talk, but using group work to allow pupils to help one another. At the end of the lessons he usually went over the solutions, apparently to allow those who had it wrong to copy out a correct solution. There was little attention to individuals.

Later clarification from Gift

It is good to dominate the talk when teaching, it helps pupils to feel free and contribute what one knows.

There was little attention to individuals due to time fact, I mean the lesson was given few or not enough time hence I only managed to assist those who had big problems.

At *Standard 7*, Brenard rarely helped individuals in class time. After his lecture pupils worked alone on exercises and he moved around to correct their work. Many had problems with some questions but he just marked them wrong. Like Gift, he went over the correct solutions on the board at the end in the hope that this would sort out any problems and reinforce correct methods.

At *Standard 7* Ralph helped pupils by using the technique of asking another pupil to show how things are done. My notes report this many times as he was careful to make sure all pupils were involved, but only with correctly performing the next step (e.g. in a ratio calculation) and not with answering deeper questions such as 'Why does this work?'

In summary the predominant style offers only rare individual help and at the lower levels (except for Mary's group work) it is very easy for pupils to get lost. The 'safety net' seems not to exist and many fall through only to be detected at the examination time when it is already too late. Many of these pupils are likely to become repeaters or dropouts. All teachers still teach to the whole class, assuming that they are all at the same stage and must all keep up. Differential teaching has not yet been considered.

6.4.5 Interviews with observed teachers

Patricia told me about how she helps the slower learners.

Normally when she is going around marking, she marks the work of those who are fast enough. For those who are slow enough she might leave them for some time to wait for corrections. She might not have the time to assist them individually, those who are slow learners.

(Patricia, interview translated by Grames Chirwa, 2005)

Clearly the pressure of time weighs heavily on teachers with about 100 pupils, and it would be easy for slower pupils to get ignored.

Later clarification from Patricia (as translated by Grames Chirwa)

Patricia insisted that the method she uses of 'helping' a child by asking another child to do something correctly to show the class the correct answer is a good method of helping her children as others really learn something.

Mary agreed with me that some of her students are very slow, and some copied from others. I asked her how she helps the slower ones.

Those are the ones who, whenever the lesson is taught, I have tried during correction and assist them, and tell them to work and I also have to help them but normally I emphasise that they should try to work as fast [as the others] because they want to catch up. I talk to them that they should concentrate. ... Especially when there is group work ... there are leaders who assist them and help them how they should do the work other than just copy from others.

(Mary, interview, 2005)

Later clarification from Mary

Slower ones are helped in the course of learning when I go round marking pupils' work and when correction is done after assessment. And also I encourage slower ones to work hard and, I work on their pace for them to understand.

6.4.6 Summary of results on meeting the needs of all pupils

Government policy has been active in this area. Particular disadvantaged groups, including girls, have been nominated for attention. Concern about the dropout rates has led to targets and strategies to reduce them. Recognising that poor teaching is a contributing factor, targets have been set for recruiting, training and resourcing many more teachers.

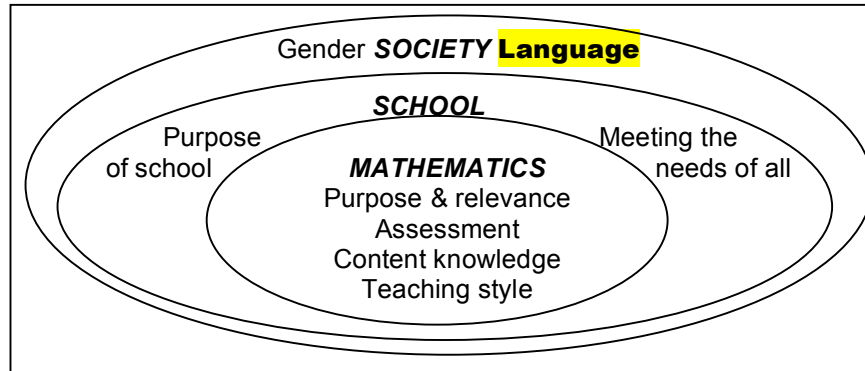
There is less government policy concerning the fate of the 80% 'out-of-school youth' who do actually drop out, or for the adults who have had little education.

Educators provided many reasons why pupils drop out of school, with large classes, poor teaching and lack of resources heading the list.

The ability of teachers to provide for the range in the classroom was raised in regard to 'those who get behind'. The majority claim to assist in class time at lower levels, and provide out-of-class help at upper levels. The majority aim for respect as a management tool, but more females than males use punishment, even though they know it is not officially approved.

My observations suggest that individual help is rare, and almost impossible at the lower levels due to the massive class sizes. When a class of 100 or more is taught under a tree, some children are going to get lost and not noticed.

6.5 Language of instruction



The language in which instruction takes place is significant for many reasons, discussed below. The policy is in two parts: Standards 1 to 4 and 5 to 8. This policy is not followed by many teachers, for a variety of reasons.

6.5.1 Policy

In 1968 President Hastings Kamuzu Banda declared Chichewa (formerly known as Chinyanja) to be the national language and medium of instruction for Standards 1 to 4. 'Schools that did not teach in Chichewa would no longer get a grant from the government.'

In 1996 this was changed in favour by a Ministry directive to the present 'policy', that 'children should be learning in their mother tongue'. Here is the actual text of the 1996 directive:

The Ministry of Education would like to inform all addressees that with immediate effect, all standards 1, 2, 3 and 4 classes in all our schools be taught in their own mother tongue or vernacular language as a medium of instruction. English and Chichewa will however continue to be offered as subjects in the primary curricula. In the past Chichewa was used as both a medium of instruction and subject, making it very difficult for beginners to grasp ideas. However English will be used as a medium of instruction beginning in standard 5.

You may wish to know that research has revealed that school children learn better and faster if they are taught in their own mother tongue or in their own vernacular language during the first 4 years of their formal education than when they are taught in a second language as a medium of instruction. It is for this reason that this policy is being instituted.

MoEST circular letter (1996)

6.5.2 Interviews with educators

The history of language policy in Malawi was explained to me by Dr Hartford Mchazime. In early times, the three main languages (Chitumbuka, Chiyao and Chinyanja) were used in different regions of the country for lower levels of education. The missionaries who controlled education before independence resisted any attempt to establish a national language.

The British government said 'if you want to give the Africans a language of their own, they are going to unite faster to rise against British rule. So you must keep them separate by separating their languages'. So that is how any attempt to create a national language was stopped.

Mchazime (interview, 2005)

Mchazime explained that in 1968, four years after independence, Banda created the first policy above. Chichewa was spoken by more than 70% of Malawians. Then in 1996 after Banda was deposed, the new policy was sent out. I discovered that most educators know the 1996 'directive' and were able to quote it to me more or less exactly. There were some differences of opinion about whether the 1996 circular constituted a policy directive or not.

Mchazime summarised the situation this way: There are two opposite forces working on language policy in education. These are:

- the role of local or home languages;
- the role of English.

The case for local or home languages in the lower primary levels

In 1996 the Ministry of Education established the Centre for Language Studies as part of the University of Malawi. Its major task is to 'promote and develop Malawian languages'. It also advises the Ministry about the implications for education. I visited this centre and spoke with Dr Kachiwanda.

We really feel that the local languages have a place in our education system. But at the moment there is some kind of resistance, especially the elite that they do not look at the local languages as being that important.... considering that Malawi is a multi-lingual country and though we have Chichewa as our national language which is also the prescribed medium of instruction in the lower level of primary education in standards 1 to 4, we are also aware of the fact that in certain communities Chichewa is not the dominant language. As such children from such backgrounds go into school carrying with them a language which is different from Chichewa so they meet Chichewa for the first time in the classroom and they have difficulties learning in Chichewa.

Kachiwanda (interview, 2005)

Surprisingly, Kachiwanda's statement (above) indicates that the Centre for Language Studies does not recognise the circular letter ('directive') from the Ministry in 1996 as official policy. It may be that many teachers share this lack of recognition of what others regard as official policy. She explained why she ignored the 'directive':

But that circular met a lot of resistance. There was a lot of outcry in the media that using local languages in education would lower the standard of education and would lower the quality of English. And there was also resistance from the teachers themselves. Because they were afraid that if this is implemented it would mean that they would be asked to move into areas where they did not want to teach. For example those who know Chitumbuka would be asked to go and teach in their home areas where their first language would be of use in helping the children learn better using a language that they understand.

Kachiwanda (interview, 2005)

She explained that, because of that outcry, the Ministry of Education 'withdrew'. This has led to considerable confusion. This also led to the Centre for Learning Studies being asked to do more socio-linguistic research on the languages in Malawi. They researched the views of parents, teachers and students themselves on languages. The majority view preferred the use of local languages in education, but more work needed to be done on the dialects. In her view, the government is taking a long time to act on making a decision about languages in education.

In 1999 a series of annual National Symposia was begun that has the aim of creating a new language policy. Despite the continuing discussions, no new policy had emerged by July 2005. (As I complete this thesis in early 2008, it still had not been determined.) However in the view of many educators, the present 1996 policy is largely ineffective.

When you go into the field what you see is that the textbooks are written in Chichewa, most of the teachers are using Chichewa. ... That is the contrast that you see between the policy and the classrooms. ... This is the mismatch between policy and practice. ...

Mchazime (interview, 2005)

I asked, how is it that teachers prefer to teach in Chichewa when the majority of children in their classes speak Yao at home? Mchazime explained it in terms of training.

When I asked one of the teachers in the north and he said 'one of the reasons is that all our training in Teachers' Training Colleges is about how to teach Chichewa and not the other languages. We are not confident to teach in Chichewa.'

Mchazime (interview, 2005)

I also spoke to a self-acknowledged member of the 'elite' in Malawi, Dr Moto. Moto also recognises the need for the use of the child's home language in the early years of education.

... language does act as a huge barrier to communication in terms of teaching especially perhaps in the early years, where the students have not perhaps acquired the skills of understanding a foreign language and then learning the subjects which they are supposed to learn. So somebody learning mathematics has got a double problem they have to surmount. One is to understand the language and the other is to understand mathematical concepts. If the language is not understood properly, my own view is that they will not understand the concepts.
Moto (interview, 2005)

So there would seem to be strong arguments for the use in Standards 1 to 4 of home languages (not only Chichewa, the national language).

The lack of a suitable mathematics register in Chichewa

Dr Kachiwanda reported there are no materials in schools to be used in languages other than Chichewa or English. Teachers wishing to teach in other languages need to translate difficult mathematical and scientific terms, but they have no useful terms in the local language to help the children to understand. There is a lack of local terms for technical jargon in science and mathematics. Soon the Centre for Language Studies will undertake a major project to determine equivalents in Chichewa.

Like 'fraction' you find that the words are just given a resemblance to Chichewa and you write 'fulakishoni'. That kind of Chewanisation of the word doesn't give any meaning to the pupil. It doesn't mean anything.
(Kachiwanda, interview, 2005)

Kachiwanda pointed out that new scientific words need to be coined for national development, for example for communicating ideas about HIV/AIDS in meaningful ways to the rural masses. New words that are 'Chewanised English' terms are meaningless in Chichewa, and will not be useful. There is equally no mathematics register in other local languages. However, there may be work on some of these languages happening in other African countries; for example both Zambia and Mozambique have sizable populations of Chewas.

The problem of the lack of a mathematics (and science) register in Chichewa is also discussed by Kishindo and Kazima (2000). Their conclusion is that 'Chichewa is currently inadequate as a vehicle for conveying scientific information in general'. They describe how mathematical *concepts* are translated meaningfully into Nigerian languages and also Kiswahili (the Tanzanian language). They contrast this with many examples of the Chichewanisation of English terms, which assumes 'that the pupils understand the concepts behind the terms, regardless of whether they are in their Chichewanised form or in English'. (Kishindo & Kazima, 2000, p. 113). They conclude by recommending a process for creating a mathematics and science register in Chichewa.

Classroom research involving language

Dr Mchazime expressed considerable concern regarding the quality of teaching in *any* language.

We have done studies with IEQ, and there are children who can spend four years in a classroom without ever writing their name.
Mchazime (interview, 2005)

A number of studies have been conducted into classroom experiences of language. Mchazime described a study (Tiede & Mchazime, 2004) in which teachers were expected to teach in the home language (Chiyao and Citumbuka) and the children performed far better in literacy and numeracy items than equivalent children in control schools in these districts where the children were taught in Chichewa. This has been described more fully in [section 2.3.4](#).

Kaphesi (2001) reported the results of research into the 'Effects of home language on pupils' performance in mathematics' done by the Improving Educational Quality (IEQ/Malawi) project. These results have also been described in [section 2.3.4](#). In summary,

... pupils whose home language is Chiyao have more problems with mathematics learning than other pupils. The problem is more compounded when they are taught by a teacher whose home language is Chichewa ... perhaps due to demands for technical terms by mathematics that may not be readily available in Chiyao for classroom use.
(Kaphesi, 2001)

Furthermore, in this IEQ study, 64% of pupils spoke Chiyao at home, but 67% of their teachers indicated that they (the teachers) could not speak Chiyao. So the majority of these standard 1, 2 and 3 classes were taught in Chichewa to pupils whose home language was not Chichewa. (Chilora and Harris, 2001)

This is consistent with the *informal* data obtained in my smaller study around Domasi. As I moved around to thank each school for participating, I asked each head to estimate the percentage of Yao speaking children in attendance. One school reported that almost all pupils were Chewas, and were all taught in Chewa. Another school reported roughly equal Chewa and Yao pupils, but no teachers spoke Chiyao, so all teaching was in Chichewa. In a different school, most pupils were Chiyao speakers but all teachers teach in Chichewa, the head claiming that only about 1% would not understand them, because 'most pupils are bilingual when they start school'. (The head also admitted that his son at the school only spoke Chichewa.)

The Malawi Breakthrough to Literacy and the Literacy Across the Curriculum projects (see [section 7.8.2](#)) were successful because of many conditions being met, but the most essential was the use of the children's home language.

The case for more English

Some of the educators I interviewed also offered an argument for the use of more English at lower primary Standards, possibly to the exclusion of local languages. According to Dr Francis Moto,

the language policy largely divides people into socio-political groups. Those that acquire the English language and can speak it very well ... have got chances of progressing in school. ... In doing selection of who is to continue with education, English is used as a barring tool.'
(Moto, interview, 2005)

This logically leads to an argument for the use of English extensively in the lower levels, an argument that is being used by many in the Ministry of Education to argue against the use of local languages.

... listening to officials ... and others who have worked in the civil service, it appears as if they do not ... favour the introduction of the local languages even in Standards 1 to 4. They have said that this will dilute the standards of education where the high quality of education is equated to learning or speaking in English. So that is one side of the story.
(Moto, interview 2005)

In [section 2.3.4](#) I described the research of Kaphesi (2001) who compared teachers' performances while teaching mathematics in both English and Chichewa. Although he argued for 'the institutionalisation of local languages as a medium of instruction at least in the first four classes in primary school' (p. 101) he recognised the pressures on teachers to teach much mathematics in English, such as the lack of suitable vocabulary in Chichewa and considerable social pressure to raise the standards of English.

The quality of teaching of English in lower levels apparently leaves a lot to be desired. Mchazime pointed out that children who learn in their home language in upper levels (instead of English) are much more able to participate at deep levels of thought.

In Grade 7 children who are using their first language are much more articulate in arguing cases to get their points understood by other students. ... You present the same case to the children using English and they don't understand.
Mchazime (interview, 2005)

The professional development program called MTTA (Malawi Teacher Training Activity) aims to assist teachers to teach content well in English. There are reports and comments on observations of teachers working in this program in [section 7.6.2](#).

So there are also arguments for more English use at the lower primary Standards.

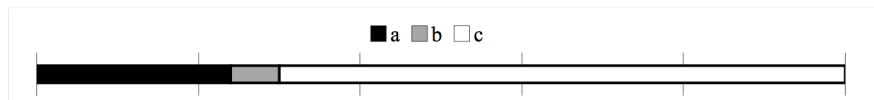
6.5.3 Survey results

What teachers say they do

The actual wording of the question on the questionnaire is given below, with the responses from 83 teachers.

When teaching mathematics what language do you use?

a	The pupils' home language whenever I can	24%
b	Only English.	6%
c	A mixture of home language and English, whichever is needed.	70%



A strong majority voted for a mixture, but there is a significant minority voting for 'home language'. This is not the whole picture since there are (at least) two languages in use (home language and English) and these apply at different years levels.

Here are the results when related to Standard levels.

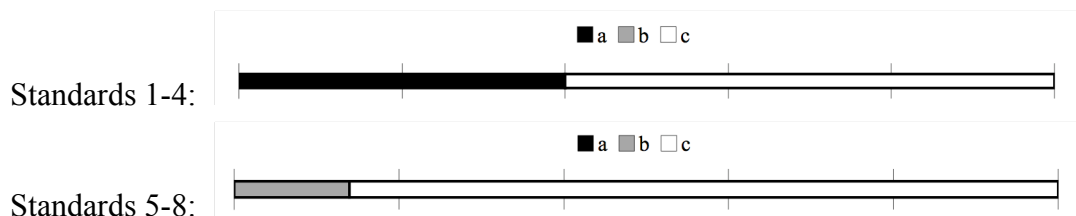
Q	1	2	3	4	5	6	7	8
a	5	6	6	2	0	0	0	0
b	0	0	0	0	0	0	1	3
c	8	9	6	5	9	8	7	6

There is clearly a split in responses between those in Standards 1 to 4, and those above. This is what we might expect. However much less expected are the numbers in the lower levels who teach in a mixture of pupils' home language and English.

When teaching mathematics what language do you use?

Std 1 to 4 Std 5 to 8

a	The pupils' home language whenever I can.	40%	0%
b	Only English.	0%	14%
c	A mixture of home language and English, whichever is needed.	60%	86%



At the higher levels the vast majority teach both in English and the pupils' home language. Only four say they use English only.

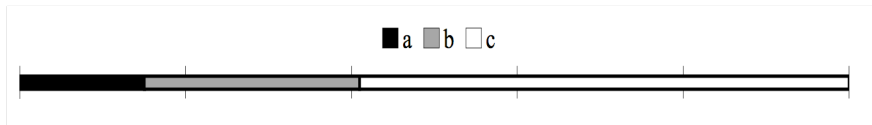
What teachers would like to do

The relevant question and its responses appear below.

When teaching mathematics what language(s) would you like to use?

a	I would like to use the pupils' home language whenever I can.	15%
b	I would like to use only English.	26%

- c I would like to use a mixture of home language and English, whichever is needed. 59%



There are many more who would like to ‘use only English’. The breakdown by levels reveals that preferences differ from practice according to level. Lower level teachers prefer to move away from home language only into either English only or a mixture. Upper levels prefer to move away from the mixture towards either home language only or (the more popular) English only. This implies that they are not comfortable with code-switching between Chichewa and English.

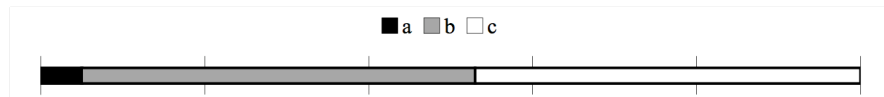
When teaching mathematics what language would you like to use? Std 1 to 4 Std 5 to 8

a	The pupils’ home language whenever I can.	22%	5%
b	Only English.	10%	48%
c	A mixture of home language and English, whichever is needed.	68%	47%

Standards 1-4:



Standards 5-8:



In each of the Standard 5 to 8 classes I observed, only English was spoken by the teachers, except for a very few very brief remarks to individuals. Maybe this was due to the small sample I had chosen, or because I was listening, speaking only English.

What teachers think is policy

Since the policy is different for lower and upper levels, there is no value in presenting overall data. Here are the responses split according to the levels. At both Standard 1 to 4, and also 5 to 8, there is a great deal more confusion among teachers about the actual policy.

When teaching mathematics, what language does the Ministry want you to use?

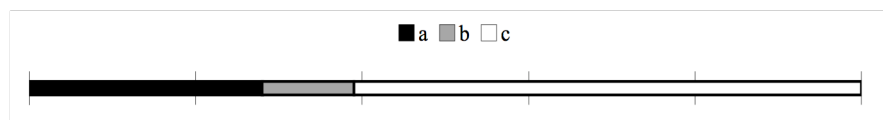
Standard	1	2	3	4	5	6	7	8
a	6	2	4	1	0	0	0	0
b	0	2	1	2	4	7	6	5
c	7	10	7	5	5	2	2	3

Here is the split reduced to the lower and upper primary divisions.

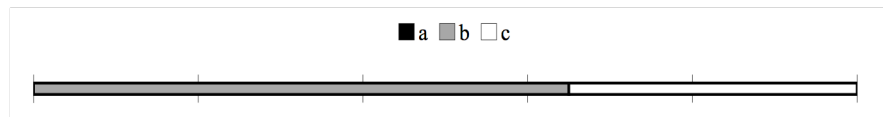
When teaching mathematics, what language does the Ministry want you to use? Std 1 to 4 Std 5 to 8

a	The pupils’ home language whenever I can.	28%	0%
b	Only English.	11%	65%
c	A mixture of home language and English, whichever is needed.	61%	35%

Standards 1-4:



Standards 5-8:



Despite never using 'English only' in lower classes, there were five (11%) teachers who think it is Ministry policy for them to do so.

In the upper levels, about a third of teachers are clearly unsure about whether they are permitted to use code-switching to help pupils when needed, or whether they do it against policy. There are 57% of upper level teachers who teach in both languages but think the Ministry expects them to use English only.

Overall 49% of teachers think that policy expects them to use two languages to facilitate teaching.

6.5.4 What teachers were observed to do

At this point I will briefly describe the practice of each of the six observed teachers in terms of the language of instruction.

Standards 1 and 2: Patricia taught this class entirely in Chichewa. (I was told this by my assistant, Grames, and also by Patricia herself.) However she used the English names for numbers: one, two, etc. and not Chichewan words.



Photo
6.5

Standard 4: Mary also taught entirely in Chichewa. She also used English names for numbers.

Standard 5: Alippo taught entirely in English. In her class she used group work during which the pupils spoke to each other in Chichewa.

Later clarification from Alippo

Yes, it is true and it is a policy. From Standard 5-8, teachers should teach in English and explain in their mother language where they do not understand or when trying to explain the important point (for Standard 5) as it is their first class to be taught in English.

As English is problem to them in groups, they have to discuss in Chichewa – if they were to speak in English, it means nothing could be discussed in groups.

Standard 7: Gift also taught entirely in English. In his class he used group work during which the pupils spoke to each other in Chichewa.

Standard 7: Brenard spoke entirely in English. There was no group work.

Standard 7: Ralph spoke in English but during his interview he mentioned that he sometimes teaches a complete lesson in Chichewa so that pupils get the ideas clear, before reverting to English.

6.5.5 Interviews with observed teachers

Patricia – Standards 1 and 2:

At Patricia's interview I raised the question of the use of English number names rather than Chichewa names. The Chichewa names are built on the additive principle, so that six is "five and one more", and so on. Her response was:

Sometimes we use English and sometimes Chichewa. The Chiyao number words are different. English words are used for numbers because it becomes very difficult for the pupils to understand the number words. When you come to six you have to use something like addition – six is two things which you have to add, so English words are a bit straightforward and short. If she had to ask the children in Standard 1 to count to seven they would have got confused, so English is much easier.
(Translated by Grames Chirwa)

Patricia told me that the Yao speakers have no trouble understanding Chichewa. To clarify the issue regarding Patricia's language of instruction, Grames and I re-interviewed her, asking her to tell us what percentage of her large class spoke Chichewa and what percentage spoke Chiyao. She did not know (having never asked them), and when asked to find out, she asked them to say, not what language was spoken at home, but "Who goes to pray on Fridays?" In doing this she was making an association between religion (Islam) and Chiyao speaking, which is not a very close association. (This information comes from my assistant Grames, who has native Chiyao speakers in his Christian church.)

In Standard 1, of the 95 pupils present at the time, 42 indicated Friday prayer. This makes 44% probable Chiyao speakers. In Standard 2, of 63 pupils 36 (57%) were possible Chiyao speakers. Patricia does not speak Chiyao, but assured me that her children all understood her in Chichewa. (Chichewa, the national language, is also taught as a separate subject in all primary schools at all levels.)

While we were at Patricia's school we were visited by the village chief, and took the opportunity to ask him the language spoken in the homes in the area. He said that most of the children in Ntondo school are Chewas although there is a mixture. (Both the conversation and translation by Grames Chirwa were recorded.) This suggests that many Chewas attend Friday prayer, and the Yao percentages are lower than Patricia's question evoked.

Later clarification from Patricia (as translated by Grames Chirwa)

Patricia insists that she uses English for numbers because it is straightforward. She however says that she has now started using Chichewa for numbers starting from 6. She however indicated that she uses Chichewa for numbers above 6 very rarely.

I also asked her to comment on the method she used to find out the number of native Yao speakers in her class. She said that when we asked her about this, she asked her head teacher if he at all knew something about the numbers. Her principal advised her to use this method of associating Moslems as the only native Yao speakers. She agreed that it was a wrong method and she was misadvised.

Paradoxically however, I asked her as to whether the village chief we met at her school was right that most of the pupils in her school are Chewas. She said the chief was correct because she had observed that most of the pupils in her school are Christians compared to the Moslems. This to me shows that it is a common method of associating religion and Yao speakers in finding out who are Yao speakers at a certain place.

(Comments from Grames Chirwa)

Mary – Standard 4:

Of the 83 teachers surveyed, only Mary chose to distinguish between the 'pupil's home language' and 'Chichewa'. I asked her to tell me why she had done that.

I understood that you had said 'home language' but to me it was not specific. The children around here speak many languages. I wrote 'Chichewa' because I use Chichewa in teaching. They are all good at Chichewa. When they come to school they already know two languages. Even at home they speak Chichewa.

To clarify this, I asked her to find out the percentage of Chiyao speakers in the class, and to tell us her own home language. In her class of 74 there are 59 native Chiyao speakers (77%), and she said that they speak Chiyao in the playground. Her own home language is Chiyao, but she still teaches only in Chichewa. So she knows she does not teach in the children's home language, although she believes that the Ministry expects her to do so.

Later clarification from Mary

I entirely taught Standard 4 Mathematics in Chichewa and also used English names for numbers. This is so because at junior level of education (Std 3 and 4) pupils are already equipped with knowledge of numbers. They know most of the English names for numbers. Chichewa is the language of instruction from Std 1-4, except for English and the rest of the subjects are taught in Chichewa. This is the government's plan through the Ministry of Education, and the response I give to the question you asked me as to why I taught in Chichewa, and used English names for numbers is that there is no harm for that is our procedure throughout the country. And also Chichewa is not home language for pupils speak different languages.

Alippo – Standard 5:

Alippo explained that earlier in the year she often taught in Chichewa to help the students to make the transition to English only.

From Standard 1 up to Standard 4 they are taught in Chichewa, their mother's tongue. Now when you teach in English, most of the pupils they do not understand what the teacher is trying to explain. Now when you take that topic and explain in Chichewa they understand.

So in Standard 5 you explain to them in English. If you find that most of the class don't understand you explain to them in Chichewa – so that they understand what you mean. Now little by little the pupils will understand English. So by second term most of the pupils will understand English very well and will answer in English.

Gift – Standard 7:

Gift feels that pupils must learn English, and he uses his mathematics teaching time as a vehicle for the learning of English. He code-switches for a few words in order to help children use English vocabulary.

The problems are because they all speak Chichewa, and though sometimes they will use Chiyao and other languages. Sometimes I explain in English and I ask them to answer in Chichewa, so that I can easily check that they understand what I am saying in English. I use more Chichewa in Social Studies, but in mathematics I am serious about using English, whether they like it or not.

Gift's mathematics teaching is always in English, but it was noticeable that when talking among themselves the pupils used Chichewa. Gift explained that pupils preferred the use their mother tongue to help them understand ideas better. 'Sometimes, in Social Studies, I will explain in Chichewa and ask them to answer in Chichewa. But in Mathematics I am serious about teaching and learning in English.' He uses his mathematics teaching time to also help pupils learn more English, however he admitted that at times he code-switches to make the ideas clearer to pupils, but 'I don't like to mix up the languages'.

Brenard – Standard 7:

Brenard has taught in upper classes for nine years, mixing English with the local language. He explains how he chooses which language to use.

Some topics are easy to teach in English and pupils can understand, but there are some topics which need explanation in the local languages, and then pupils can understand easily. Topics that have been taught in previous years can be taught in English. Topics with whole numbers are easy to teach in English, but some topics like averages, maybe, even fractions, you have to explain in Chichewa, the local languages.

The hardest to teach in English are the verbal topics. They don't really understand English and they need you to explain. The hardest are those with weights – they don't understand what they mean.

Some pupils speak Chiyao at home, but Chichewa is very familiar to everyone.

Ralph – Standard 7:

Ralph explained that there are many Yao speakers in his school, the same school as Mary, who had 77% Yaos in her class. The percentage in Ralph's class is not known to me.

Sometimes we have to use Chichewa in maths teaching to make the examples more clear. We need to mix because that is what they are used to do from the lower classes. In standard 5, 6, they are supposed to be taught in English throughout but there is a lot of mixture, so because of that we have problems when they come to Standard 7 and even to Standard 8.

Ralph realises that it is the lack of confidence in English that causes problems in the upper levels.

When the lesson is in Chichewa oh it is easy, well understood. They are free to ask; where they don't understand they ask you freely when it is in Chichewa. But when we are using English somebody can just be seated showing that she or he has no questions, when there is a question, because she or he is afraid of speaking in English.

For Ralph, code-switching is a necessary evil, and sign of his own failure to use English well.

It is not good to put some Chichewa in a lesson. So if we are used to a mixture of languages we are not doing well. Personally I mix, just for the good of the children, knowing that they are already in trouble. It isn't my wish to mix with the Chichewa. I don't like mixing. I mix only when I fail to express myself clearly in English. I have been with them for quite a long time, so I can tell when I need to jump to Chichewa to stress a point.

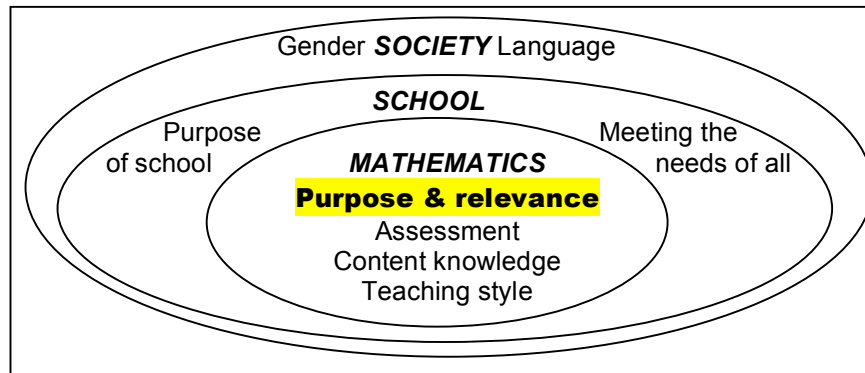
6.5.6 Summary of results on language of instruction

There is confusion about what is official policy, even among the educators who can be expected to know. Some, such as Mary, believe that Banda's directive from 1968 – requiring Chichewa to be used as the language of instruction in Standards 1 to 4 – still stands. Others appear to believe that the circular from 1996 – requiring the children's home language – is the official policy. It is not clear whether or not that the circular was officially withdrawn in response to a public outcry.

However practice seems less confused. In probably all cases, teachers seem to use Chichewa as the language of instruction in Standards 1 to 4. This is the case even for Mary, whose own home language is Chiyao, and has 77% Yaos in her class. Sometimes it happens because the teacher does not speak the home language. However the lack of proper words for mathematical ideas in Chichewa remains a problem at lower levels.

There is no confusion about the language of instruction expected in Standards 5 to 8 (English), but there seem to be many teachers who often switch to Chichewa, or let their pupils use Chichewa, in an attempt to improve both understanding and participation.

6.6 Purpose and relevance of mathematics education



The purpose of mathematics in primary schools should be expected to relate to and support the purpose of primary education. However, the structure of western mathematics is dualistic: sometimes stressing the utility of its applications and sometimes its pure abstract logic. What do we see of this duality in Malawian primary schools?

6.6.1 Policy

The 1991 Primary mathematics syllabus

The policy regarding the current purpose of mathematics education is expressed in the 1991 syllabus for Primary Mathematics:

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 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.

Since the teachers' major exposure to the official mathematics teaching requirements are through the textbooks and Teacher's guides, the following analyses of these at two levels serves to provide a counterpoint to the policy described above.

The 1993 Standard 2 Guide

As the textbook is in Chichewa, I have not been able to analyse it. However the Teachers' guide is in English, and teachers are required to move between two languages in preparing the lessons in Standard 2, as also in Standards 1, 3 and 4.

For each topic the guide provides specific objectives linked to the specific assessment tasks requiring a level of mastery. For each of the 24 units there are a suggested number of lessons. It is strange that the mathematics specialists who wrote this did not make sure that it added to something like the total of lessons available. When I added the lessons, not counting the occasional need to repeat a lesson or to allow for teacher absence, I discovered that 216 lessons are required to teach Standard 2 using the timing in the guide, each lesson taking 35 minutes.

However there are three terms per year, and in 2005 these were 10 weeks, 14 weeks and 12 weeks. The last two weeks are taken up with assessment, so there are really only 30 weeks available for teaching, or 150 days. To complete the course pupils would need at least 7 lessons per week. This does not happen, the usual being one 35-minute lesson each day. However it is possible that there were more teaching weeks when the guide was first written in 1993. I have not been able to check this. It is interesting to see that if the course were taken in order, pupils would get through all of Number and Money, but no further, entirely missing out Geometry, Measurement and Graphs.

The suggested activities are very detailed, requiring a large amount of equipment. Most activities involve demonstrations, and are introductions to exercises in the book.

The 1995 Standard 5 Guide and textbook

Standard 5 is the first level to be taught in English, as it was in 1995. This fact is not mentioned in the guide and no assistance is provided to teachers to help deal with this dramatic transition for pupils. There is a glossary provided, but only in the guide for teachers, not in the textbook for pupils. Considering that English has many specialist words or meanings in mathematics, this seems a serious omission.

Detailed objectives are written, but unlike Standard 2 there is no assistance given about assessment. With regard to the time allocation 'the teacher is advised to reteach any lesson that has not gone well, ie, where pupils have difficulty in understanding.' (p. xi) The time required to cover the 45 units in this course is 352 lessons, each lesson taking 35 minutes. Given the 150 days available for teaching, this will need about 12 lessons per week, or 2.3 per day. It is hard to believe that this much time was available in 1995 when this guide was written. As in the case of Standard 2, the early lessons just cover Number and Money, but the rest (most of the 'everyday life' parts of the course) would be left out, if the course were done as recommended and in order.

The textbook follows the syllabus in covering a vast number of little topics. The emphasis in Number, Money and Measurement is entirely on calculations (adding, subtracting, multiplying and dividing) using clumsy mixed units, and not decimals, although the metric units were designed for decimal use. (In the case of time, complex calculations with combinations of weeks, days, hours, minutes and seconds involving conversion factors of 7, 24 and 60 must leave children totally confused.) There is little reference to the actual meaning of the quantities or the units. For example, in the case of the metric system of length pupils are expected to convert and calculate using combinations of the original French metric units (km, hm, dam, m, dm, cm and mm). On enquiry I discovered that only km, m, cm and mm are ever used in everyday life in Malawi.

6.6.2 Interviews with educators

Despite what teachers say they do, there is a broad consensus that at least at Standards 7 and 8 most teachers have a clear focus on examination success.

Mr Phiri (Department of Teacher Education and Development) felt that the examinations should not be a barrier to those who learn well.

Usually if you teach people well, that shouldn't be a problem. Because whatever is called, teaching should enable people to do things. Knowing how to teach well should empower the student to tackle whatever examinations there are.

(Phiri, interview, 2005)

Few of the educators interviewed felt capable of commenting on the purpose of mathematics teaching. However one administrator did feel confident in this area. I interviewed Mr Sineta, a former mathematics teacher who is now District Education Manager in Zomba. I asked him about the particular difficulties experienced by pupils when learning mathematics in Malawi.

Mathematics is a practical subject, not remote, used every day to solve our problems. It is not that maths is something theoretical and our everyday life is also different. Most people do not relate maths to everyday life. When they do that, they think maths is very theoretical, it is useless, they cannot apply it. So they throw it out the window. They must realise they use it everyday, learn the basics and then they are there.

(Sineta, interview, 2005)

Mr Sineta also expressed the belief that most teachers did not understand or apply mathematics themselves, so could not demonstrate its usefulness to others.

6.6.3 Survey results

What teachers report they do in relation to the purpose of mathematics teaching

There were two questions bearing on mathematical purpose. One related to life preparation, and the other to the context of the applications to daily life that were being used. The wording of the first question is given below, with the responses from 83 teachers.

At present, what is the main reason that mathematics is important at school?

- | | | |
|---|---|-----|
| a | It teaches skills that help you make money. | 9% |
| b | It helps you get a good mark in the Standard 8 examination. | 1% |
| c | It teaches skills that help you have a better life. | 90% |



This shows a clear preference for preparation for life, and not examinations, parallel to the general purpose of schooling (reported in 6.3).

The second question tried to determine what kind of 'daily life' mathematics is relevant to their pupils.

What sort of examples do you use when you teach mathematics?

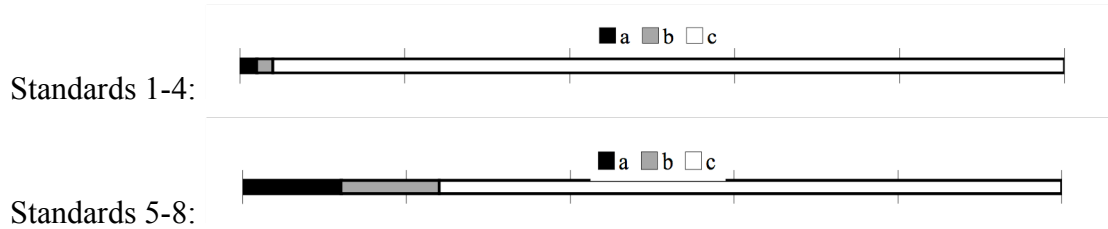
- | | | |
|---|--|-----|
| a | Examples from previous examination papers. | 6% |
| b | Mathematical calculations from situations in modern life, such as in town. | 5% |
| c | Local Malawian examples of mathematical calculations in my teaching. | 89% |



A clear majority say they are teaching using 'local Malawian examples'. In the minds of these teachers 'local Malawian' is clearly distinguishable from 'modern life, such as in town'.

However significant differences appear between teachers of lower and senior primary classes.

What sort of examples do you use when you teach mathematics?	Stds 1-4	Stds 5-8
a Examples from previous examination papers.	2%	12%
b Mathematical calculations from situations in modern life, such as in town.	2%	12%
c Local Malawian examples of mathematical calculations in my teaching.	96%	76%

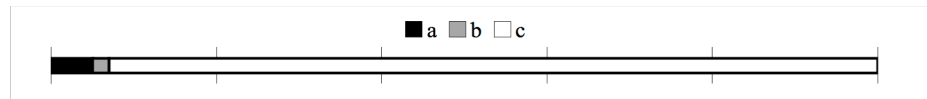


Junior primary teachers use local Malawian examples, but this is not quite so extensive among the senior primary teachers.

What teachers would like to be the purpose of mathematics teaching

In future, what *should* be the main reason that mathematics is important at school?

- | | | |
|---|---|-----|
| a | It teaches skills that help you make money. | 5% |
| b | It helps you get a good mark in the Standard 8 examination. | 2% |
| c | It teaches skills that help you have a better life. | 93% |

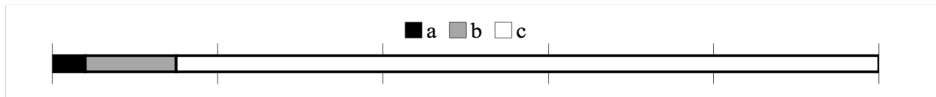


Again the results are highly consistent with what teachers report that they do.

When I asked the kind of applications they wanted to use in teaching mathematics the vast majority want Malawian rural life as the source of examples for learning mathematics.

What sort of examples would you *like* to use when you teach mathematics?

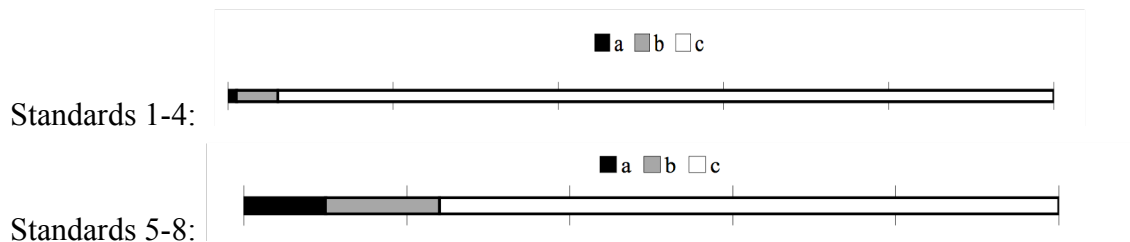
- | | | |
|---|--|-----|
| a | Examples from previous examination papers. | 4% |
| b | Mathematical calculations from situations in modern life, such as in town. | 11% |
| c | Local Malawian examples of mathematical calculations in my teaching. | 85% |



Given the level differences above, it is interesting to see whether level differences exist in what they would like to do.

What sort of examples would you *like* to use when you teach mathematics? Stds 1-4 Stds 5-8

- | | | | |
|---|--|-----|-----|
| a | Examples from previous examination papers. | 1% | 10% |
| b | Mathematical calculations from situations in modern life, such as in town. | 5% | 14% |
| c | Local Malawian examples of mathematical calculations in my teaching. | 94% | 76% |



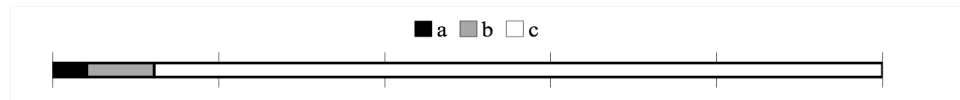
This is a very similar pattern of results to what they say they do. The differences between the levels are also similar.

What teachers think is policy

The wording is given below, with the responses from 83 teachers.

What does the Ministry want to be the main reason that mathematics is important at school?

- | | | |
|---|---|-----|
| a | It teaches skills that help you make money. | 4% |
| b | It helps you get a good mark in the Standard 8 examination. | 8% |
| c | It teaches skills that help you have a better life. | 86% |



These results are still clearly focused on life skills, but an increase in the examination orientation. These were mainly in Standards 5 to 8, where 17% of teachers think that the Ministry wants them to focus on the examinations, in contrast to only 6% of teachers from Standards 1 to 4.

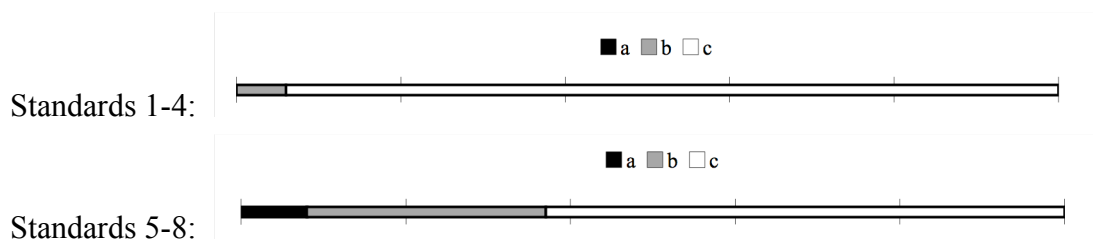
What sort of examples does the Ministry want you to use when you teach mathematics?

- | | | |
|---|--|-----|
| a | Examples from previous examination papers. | 4% |
| b | Mathematical calculations from situations in modern life, such as in town. | 16% |
| c | Local Malawian examples of mathematical calculations in my teaching. | 80% |



There are teachers who think the Ministry wants 'modern' examples, but who teach with rural examples. Who are they? An analysis of junior and senior teachers reveals that most of them teach senior primary classes.

What sort of examples does the Ministry ...	Stds 1-4	Stds 5-8
a Examples from previous examination papers.	0%	8%
b Mathematical calculations from situations in modern life, such as in town.	6%	29%
c Local Malawian examples of mathematical calculations in my teaching.	94%	63%



Many more senior than junior primary teachers believe that the Ministry is much more interested in 'modern life' applications of mathematics – and many more of them believe this of the Ministry than claim to do it. Only at senior levels are there teachers who believe that the Ministry is primarily interested in examination examples.

6.6.4 What teachers were observed to do

In Standard 1 and 2 Patricia's questionnaire responses tell us that she teaches mathematics so pupils can make money. It was not possible for me to identify her actual purpose from her teaching.

Later correction from Patricia (as translated by Grames Chirwa)

Patricia indicated that it was an oversight for her to vote for the fact that she teaches Mathematics so pupils can make money. She says she teaches Mathematics so that pupils can learn how they can use money in their everyday lives. She says she wants them to learn how to make budgets for their needs in their lives.

Mary and Alippo (at Standard 4 and 5) and Gift (at Standard 7) teach mathematics so that pupils will have a better life. Their use of group work and varied activities seem to reflect this. I observed her teaching multiplication of money, using the clumsy algorithm required.



Photo
6.6

In Standard 7 Brenard teaches to the examination. His class involved a highly teacher-centred focus on demonstration and individual practice. There were very few questions that involved thinking beyond recall.

By contrast in Standard 7 Ralph teaches mathematics so that pupils will have a better life. Ralph used demonstrations but he differed from Brenard in his extensive use of questions to involve all students, particularly the girls, in thinking about the ideas involved.

6.6.5 Interviews with observed teachers

In Standard 1 and 2 Patricia believes that mathematics relates to everyday life; she explains that by emphasizing its power to help children *think mathematically*.

Mathematics is one of the most important because it makes people to think in their everyday lives. It provokes the thinking capability of the children, compared to English which might not develop the children's capability to think as much as mathematics.

(Patricia, interview translated by Grames Chirwa, 2005)

Mary's questionnaire responses say mathematics should be important for examinations and believes the ministry supports her in this. Mary teaches Standard 4.

Alippo (Standard 5) and Gift (Standard 7) believe that mathematics should be taught for a better life, and believe the ministry supports their view.

In Standard 7 Brenard's questionnaire responses show that he sticks to examinations and believes the ministry supports him in this.

Especially in maths, we teach for them to get higher marks during exams. And also to continue with their education and going to secondary education.
(Brenard, interview, 2005)

By contrast in Standard 7 Ralph's questionnaire responses show that he believes that money making should be the main purpose of mathematics teaching. However he thinks the ministry is more interested in the examinations.

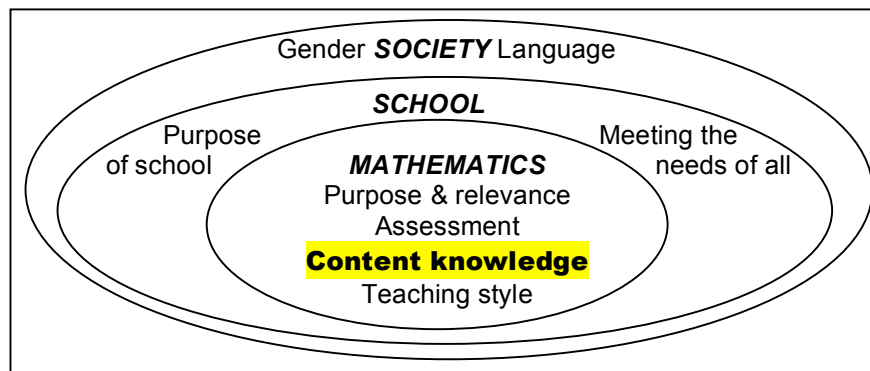
6.6.6 Summary of results on purpose and relevance of mathematics education

The official policy concerns 'poverty alleviation' and 'practical numeracy'. However the textbooks and Teachers' guides are frequently at odds with the official policy, dealing instead with abstract skill development. The syllabus and support materials were written in the 1990s and expect far too much of teachers given class sizes and the time available. This probably leads to more 'practical' topics being omitted.

Despite this teachers widely support the uses of Malawian examples, and want their mathematics teaching to relate to everyday life. The evidence from my own interviews and the survey supports this desire in teachers to use 'local Malawian examples' rather than 'modern life'. However rural applications are not found in the textbooks, and many teachers may not be sufficiently confident about mathematics to identify them for themselves.

Being able to do so depends on a good understanding of mathematics. How secure is the average teachers' knowledge of mathematical content?

6.7 Content knowledge of mathematics



One of the issues relevant to achieving relevance is the extent to which teachers understand and can use mathematics themselves: their mathematical content knowledge. Moreover is their content knowledge related to daily life, and are they able to 'apply mathematics for solving practical problems in their own daily lives'?

Teachers usually have only two years of training and a background in the system, usually only to Form 2. Do they have enough content knowledge about mathematics to be confident about teaching it?

We saw above that teachers claim they are already teaching using rural Malawian examples. Do they really know enough about how mathematics is used in daily life to teach about its applications?

6.7.1 Policy

The policy, unstated but clear, is that teachers should know the subjects they teach, and should know how to teach them. Implementation in the past has been attempted through the Teachers' Training College courses, and most recently through the MIITEP model (see section 2.4). For teachers already in classrooms, there has been little support, except for the MTTA project.

6.7.2 Interviews with educators

Dr Kadyoma and Dr Machazime head a project called MTTA (Malawi Teacher Training Activity). I observed a session in which Standard 3 teachers were being taught about multiplication and division. This session concluded a series of week-long workshops for these teachers. They used hands-on materials (bottletops) to illustrate basic ideas of division and demonstrate links between division and the idea of multiplication. When using bundles of ten sticks (each tied with a rubber band) to solve problems such as $52 \div 4$, some teachers became confused. They had clearly never before had to actually divide things bundled in tens and ones and explain their thinking. The leader stressed “It is important to have an explanation for whatever we do”. It is interesting that the course was conducted in English, but these teachers normally teach in Chichewa.

Dr Kadyoma told me about MTTA. In 2004, they conducted a baseline survey of teachers in four regions (two southern, one central, one northern) in which all teachers were given a shortened Standard 8 examination in Mathematics, Science and English to determine their strengths and weaknesses. The results were rather depressing! Here are the results for mathematics across all four regions.

Mastery level	No competence (<30%)	Partial mastery (30-80%)	Full mastery (>80%)
Percentage	41.6%	54.7%	3.5%

The team running the project analysed the topics that had the worst results and designed a series of INSET activities around these evident needs. One such session is described above.

Mr Absalom Phiri (Department of Teacher Education and Development) expressed serious concern with the lack of content emphasis in MIITEP (see [section 2.4](#)), mainly due to the lack of time in college for those with poor mathematical backgrounds.

This program had to scale down content in some areas, and mathematics was one of the subjects that suffered in that contest. So there has been more methodology than academics.

The approach generally was good The arrangement of the handbooks was to show them how to develop concepts, so it is methodology not in a vacuum, but how to develop specific concepts that they were to teach in the primary school. [Most books were for self-study while out in schools.] Those which were given in college – students were taken through how to develop concepts. ...

Those who had a very strong mathematical background in secondary schools, when they go through that it helps them to understand how to teach, and they teach better. ... But some people were recruited whose backgrounds were very poor. These people did not respond so well to this training. And unfortunately these people are in the majority.

(Phiri, interview, 2005)

This is reflected in the opinion of Mr Sineta, the former mathematics teacher. He rated the negative attitude of teachers to mathematics as one of the major reasons that pupils do not like to learn it.

They say this maths is difficult, so many other potential maths teachers don't take it up. Sometimes it is because of the way it is taught. The teachers don't understand the subject and don't bring the concepts properly to the children.

(Sineta, interview, 2005)

Mr Phiri also told me that the students at the teachers' colleges are examined by the Malawi National Examinations Board (MANEB) and not by the college staff. In 2005 he was trying to have that policy changed, so that 'assessment should be done by those who teach'.

6.7.3 Survey results

On the questionnaire, teachers were asked to self-rate themselves in mathematics. They were also asked to nominate topics that were hard for children to understand and hard for them to understand. Here are the results.

How good are you at doing mathematics?

Good 56% Just good enough 41% Not good 3%

Many teachers seemed to have placed a vote of confidence in themselves at this point.

What are the hardest mathematical topics for you to understand?

The two outstanding results were Measurements (29 responses) and Word problems (23). The next (11 each) were Dividing (whole numbers) and Multiplying decimals. Teachers recorded an average of 1.3 topics of concern to them. These were the topics about which they felt least confident. The topic receiving the *least* votes was 'Handling money', indicating ease of understanding.

What are the hardest mathematical topics for pupils to learn properly?

There were many: Word problems (43), Measurements (33), Dividing (32), Multiplying (26), Multiplying decimals (25), Understanding fractions (24), and Multiplying fractions (20) were the most chosen. Teachers recorded an average of 2.3 topics that are hard for pupils to learn. These were the topics where they need the most help with how to teach.

It is significant that the same topics are rated 'hardest' for both teachers and pupils: Word problems and Measurements. These are the topics in which Mathematics is most obviously related to 'daily life'. However, as we will also see in section 5.8, 'word problems' is also the only format for application questions on the Standard 8 examination.

6.7.4 What teachers were observed to do

There are some topics in the syllabus and textbook that seem very remote from the 'daily life' of many pupils. One of these is Roman Numerals, which are highly peripheral to life in a Malawian village.



Photo
6.7

Yet I observed Gift teaching this topic in Standard 7. It was clear from his attempt at explaining this strange way of writing numbers that he did not understand it himself. There

are many conventions that are followed but they are not explained in the textbook, as the textbook never explains the topics, but only provides worked examples. He became more and more tangled as he tried to make sense of the rules he had (incorrectly) provided, and the lesson ended disastrously. In contrast, Gift's lessons on 'daily life' topics of averages and money calculations ran smoothly; because he understood the topics the children related to them and saw their importance.

6.7.5 Interviews with observed teachers

In Standard 7, Brenard had taught a lesson on decimal numbers. I asked him if he could tell me when decimal numbers were used outside school, with a view to determining the links to everyday life that mathematics can make. The question was translated into Chichewa to make sure he understood it. He was quite unable to give me any contexts in which decimals were actually used outside school. He only knew of the topic in the context of the textbook and the examination. Brenard's later written comment was 'All what you have said are true. You haven't omitted anything.'



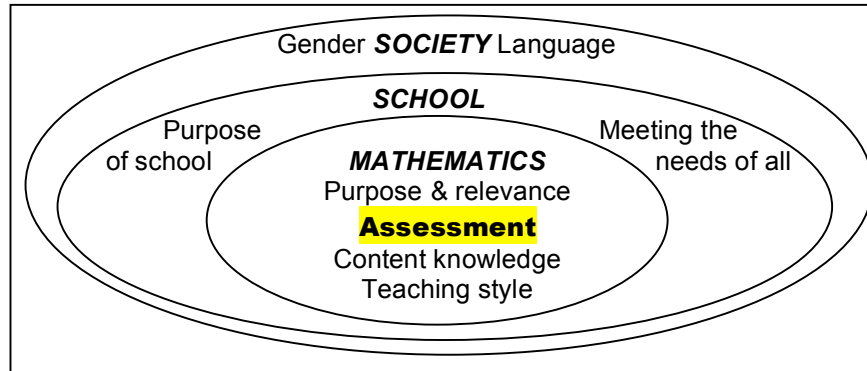
Photo
6.8

6.7.6 Summary of results on content knowledge of mathematics

It is an unstated policy that teachers should know their subject well, and given the other policies, should be able to relate it to the daily lives of their pupils. The MTTA results show that the mathematical knowledge of primary teachers is poor. Teachers' responses on the survey suggest that their greatest weaknesses are those topics relating to real life, with the exception of handling money. 'Word problems' and 'Measurements' are also the topics they find hardest to teach.

The interview with Brenard showed that he had no knowledge of the applications of decimals, or possibly that he had never thought about it. Clearly the textbook and guide (on which he depended) had not provided any support about applications. It seems likely that many teachers are at Brenard's level of understanding of mathematics.

6.8 Assessment



Annual and more frequent assessment is used to determine promotion, while others repeat or drop out. The big event is the Standard 8 assessment run by the Malawi National Examinations Board (MANEB) for selection to secondary school. All of these are tests, and as we will see, testing occurs often and has significant implications. What and how a teacher assesses shows what that teacher values in education. Here are the major issues:

- What is the purpose of this testing? Is assessment used for other purposes than grading pupils?
- Are there other kinds of assessment taking place in Malawian primary schools?
- What does assessment in Malawian primary schools show about what is really valued by teachers? How does that match with the 'goals' of primary education?

6.8.1 Policy

As part of the Mission statement for Basic Education the PIF states that 'Increased investment in education contributes to economic and social development.'

The purpose of primary education is to equip students with basic knowledge and skills to allow them to function as competent and productive citizens in a free society. The provision of primary education will be the main contribution of the education sector to poverty alleviation.

(MoESC, 2001, section 4)

And yet PIF also contains statements that strongly support the present selection process.

Pupils who are able to reach standard 8 sit the Primary School Leaving Certificate Examination (PSLCE), which determines their eligibility for entry into secondary school.

The Malawi National Examination Board (MANEB) administers national examinations and develops examination syllabuses for all examinable subjects.

(MoESC, 2001, section 1.3.2)

The support for the present examination system is shown in section 5 of PIF, called 'Institution Strengthening'. This contains a Mission Statement for MANEB which reads as follows.

An effective national academic assessment system provides the appropriate mechanism for evaluating the extent to which the national education system is advancing the goals set out in the PIF. In this connection, the broad mission of MANEB is to conduct valid and reliable national examinations for certification, selection and placement purposes and to provide professional advice when required in all matters related to assessment and examinations.

(MoESC, 2001, section 5.1.1)

The Strategic Plan (MoEST, 2005) only mentions the national examinations in two contexts: concern for lowering of pass rates at the PSLCE (Standard 8) examination, and a planned phasing out of the Form 2 examinations 'to save money'.

6.8.2 Interviews with educators

Only one educator expressed concern about the effects the selection process was having on primary education. This was Mr Lexon Ndalama, and he expressed it in the context of justifying the move towards Continuous Assessment.

The country noted that our primary education system was examination-centred and we are actually trying to move away from this. ... We have just completed a study on what learners can do in Standards 3, 5 and 7. ... There is a big gap between what learners are showing they are able to do in lower primary and what they are showing they are able to do in primary leaving certificate examinations.

(Ndalama, interview, 2005)

This concern was not expressed to me as widely as the literature review had led me to expect. In [section 2.2.12](#) I reported the findings of Miske et al, as part of the IEQ/Malawi project. The Standard 8 examination has a great influence on the entire primary education system, but it seems to be taken for granted, as a given in the system. It is possible that the need for selection has been there for so long that it is taken for granted.

I spent some time exploring the process used to manage that examination by the relevant authority. I interviewed three officers from MANEB, the Malawi National Examinations Board. I put it to them that the kinds of questions on the examination papers were able to influence the kinds of things that were taught in schools, and that there were people at MIE who were concerned that the examinations were not furthering the official goals of helping pupils to use what they learn in everyday life after school. I suggested there is a clash between learning to pass the examination and learning with a lot of real life applications. Here is the reply.

It's our major problem. The MIE guys are right. Our major problem is the competition. We have fewer places in secondary school. The teachers are under pressure. The community would not want to see their school failing to send students to secondary school. So the teachers are forced to teach in a way that will make the pupils pass the exams and get selected for secondary school. In that way the teachers will be recognised that they are doing a good job. So instead of the education driving the examinations as it were, ... now it's the exams that are driving the education.

(Mr Njati, interview, 2005)

So the chief examining body in Malawi is not happy with the effect their examinations are having, but appears to have no idea of how to change that effect.

6.8.3 Survey results

Types of assessment teachers say they do

There was just one question on my questionnaire dealing with assessment. The wording of the question is given below, with the responses from 83 teachers.

How do you assess your pupils' mathematics learning?

a	I make them repeat what I have told them.	2%
b	I ask them to show their understanding by using what they have learned.	16%
c	I give regular class tests on what I have taught.	82%



There is a clear majority who give regular tests.

Types of assessment teachers say they would like to do

The actual wording of the question is given below, with the responses from 83 teachers.

How would you *like* to be able to assess your pupils' mathematics learning?

a	I would like to make them repeat what I have told them.	6%
---	---	----

- b I would like to ask them to show their understanding by using what they have learned. 24%
- c I would like to give regular class tests on what I have taught. 70%



The majority of teachers want to assess with tests.

In comparing these results with those above, it is clear that there are a number of teachers who would like to assess for understanding but do not. Maybe they suspect that there is more to understanding mathematics than following directions.

What teachers think are policy expectations about assessment

The questionnaire wording is given below, with the responses from 83 teachers.

How does the Ministry want you to assess your pupils' mathematics learning?

- a Make them repeat what I have told them. 5%
- b Ask them to show their understanding by using what they have learned. 27%
- c Give regular class tests on what I have taught. 68%



If there is a single Ministry policy there is clearly disagreement about what it is, but the majority believe that the Ministry wants them to give tests and that is what they do.

Comparing teachers' stated actions with their beliefs about Ministry policy reveals that even those who think the Ministry wants them to teach for 'understanding' still give tests. The percentages are different because some teachers chose both categories.

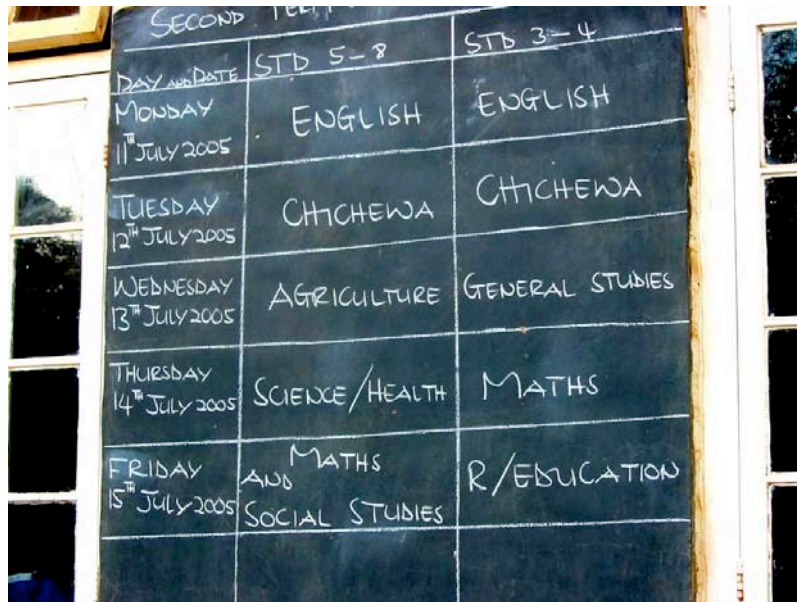
	Ministry wants understanding	Ministry wants tests	Ministry wants both
I assess understanding	2%	6%	0%
I give regular tests	14%	53%	8%

In [section 6.9.3](#) the issue of what these teachers mean by 'understanding' is raised.

6.8.4 What teachers were observed to do

When I visited schools it was 'examination week'. This meant that the majority of pupils were playing in the school grounds for most of the day waiting their turn to go into the 'examination room' to write a final test in some subject. The tests were spread over the week, so that on most days pupils only had to write one test. (It was for this reason that it was possible for me to arrange lessons to be observed at specific times.)

The photograph shows the examination week timetable on display outside the principal's office at Domasi Government Primary School. When not being tested, children played outside.



DAY AND DATE	STD 5-8	STD 3-4
MONDAY 11 th JULY 2005	ENGLISH	ENGLISH
TUESDAY 12 th JULY 2005	CHICHEWA	CHICHEWA
WEDNESDAY 13 th JULY 2005	AGRICULTURE	GENERAL STUDIES
THURSDAY 14 th JULY 2005	SCIENCE/HEALTH	MATHS
FRIDAY 15 th JULY 2005	MATHS AND SOCIAL STUDIES	R/EDUCATION

Photo
6.9

I did not observe any official testing, only class lessons. However in class lessons assessment of some type may take place, formally or informally, and this is reported below. My observations describe situations in which the teacher was able to gather data about the level of performance or understanding of any pupil or pupils. I will also describe how teachers gave feedback to pupils about their performance or understanding.

In *Standards 1 and 2*, Patricia frequently called on particular children to answer her many questions. If the child was correct she offered congratulations, and if incorrect she called on another child 'to help your friend'. In this way she was checking on the comprehension of individuals and giving feedback with correction in a non-threatening way. When she was correcting written work, she marked work right or wrong but had little time to help individuals. Once she used the strategy of having Standard 1 pupils write digits in the sand outdoors. She spent much time checking each child's work, and helped many individuals with their incorrectly written digits.

In *Standard 4*, Mary's focus was on group work, in which pupils helped each other. However she moved quickly around each group listening closely and assisting where needed. Her choice to intervene was based on an assessment of the correctness of the group discussion. The use of real materials (dried maize seeds) also enabled her to see whether or not the work was being done correctly.

In *Standard 5*, Alippo observed individuals having trouble with drawing circles (with string and a pencil) and moved in to help. When correcting written work, the faster pupils received feedback (usually a tick) and the slower ones missed out.

Later clarification from Alippo

When correcting written work, fast learners receive feedback, a tick meaning they are correct, they have done well. Slow learners are not missed but given (x) or underline where she/he has missed. This shows that he/she has hasn't understood, needs individual help, needs extra help at the end of the day. It also helps interested parents to monitor the performance of their child.

In *Standard 7*, Gift often asked questions, sometimes asking the class to reward a child's answer: "I like that – beautiful – clap hands for her." This was followed by all children joining in a rhythmic clapping pattern. Unfortunately he never explained why the answer was 'beautiful', so children simply learned to distinguish good responses from poor ones by his reactions.

In *Standard 7*, Brenard did not seem to use his questions during the lecture to diagnose any problems or check for comprehension, but rather simply to keep pupils engaged. When written work was being corrected he rarely had time to check all work, and usually only gave

ticks, crosses and a word of encouragement. Sometimes he took the time to point out what was wrong; one girl did all the work correctly but did not show $+$ or \div signs. She was told she was incorrect for that reason. This would appear to place more emphasis on form than substance.

The photo shows Brenard how marks class work ‘on the run’.

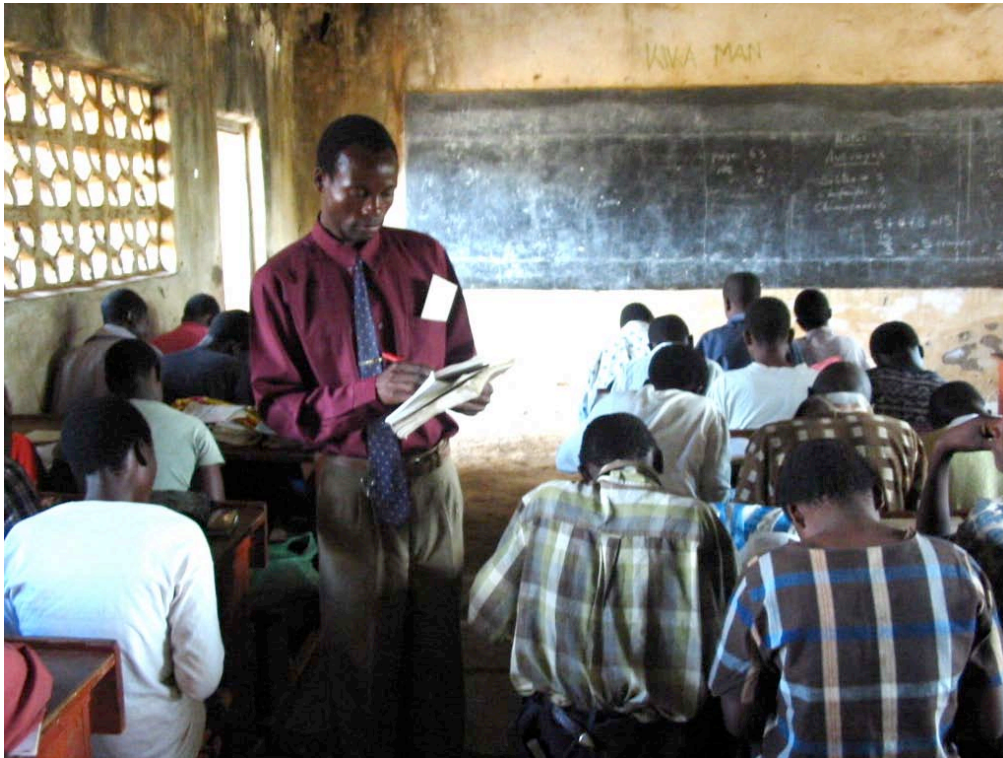


Photo
6.10

In *Standard 7*, Ralph asked questions of every person in the class, but these were often to keep pupils involved. My notes record that at one time he selected a girl “who has said nothing this morning”. Many pupils were asked to work out problems on the board. They were thanked if correct, but if incorrect, the feedback to the pupil was “Your friends say no! You are taking us away from the answer.”

In summary, teachers do their best to observe pupils’ performance and comprehension and provide feedback when they can. However this appears to be done randomly and seemingly not as a deliberate strategy. It is likely that there are many slower pupils about whose comprehension the teacher knows little, and who receive little or no feedback about how to improve. I have no evidence about whether this informally gathered data about the class performance is used to assist lesson planning in the future.

6.8.5 Interviews with observed teachers

Patricia (*Standard 1 and 2*) described a strategy that I did not observe over the six lessons, but may be common on other occasions.

The other method she takes to help the slow learners. She already knows – she has in mind in the classroom which pupils are always having problems. Now as she goes around marking those who have finished their work, she goes straight again to those whom she knows are slow learners. If they are having problems with writing numbers, she helps them by holding their pens and teaching them how to write.

(Patricia, interview translated by Grames Chirwa, 2005)

At *Standard 4*, Mary is conscious of examinations held every semester, determining which pupils will be promoted and which will repeat the year. She pushes the slower pupils to keep up with the others... ‘Because during exams each one must do their own work and cannot be assisted.’ (Mary, interview, 2005)

Later clarification from Mary

Because during exams, slow learners and fast learners, they all sit for the same work at a given period of time for competition so these slow learners need to work hard and fully participate during group work for they are free with other pupils.

In *Standard 5*, Alippo is clearly worried about why so many pupils fail.

Sometimes you think 'I am doing nothing in this classroom'. Because at the end of the term you have 60 pupils in the classroom you find that maybe 20 have passed. Is it the fault of the teacher, or the fault of the pupils? How can those 40 fail? What are you doing? ... Most of the pupils don't understand the topic, maybe they have failed. ...

Alippo told me that individual help is almost impossible, and reteaching topics (and hence leaving out other topics) is the only viable solution.

Most of the teachers they reteach that topic; individual help with the large classes is very difficult, there are maybe 70 in the class, and 20 or 30 are not doing well, it is very difficult to give individual help. So I reteach the topic so I see where I didn't teach well. Lots of the teachers will do that. ... Sometimes at the end of the year we ask the teachers 'How many topics have you not covered?' most of them tell the truth and say 'I haven't covered these topics'. ... Some pupils fail because some teachers don't want to tell the truth that they haven't covered some topics.

For example those circles, I knew they haven't understood because most of the pupils didn't do well. So I think that is part of assessment, I have to go back again and do the same work. ... We usually give short tests of Fridays.

I asked Alippo how she corrects work done in class.

Marking, it is very difficult. Because most of the time because of the large classes we just give three or four sums, for example, so that you mark the work and do corrections and find out if the pupils haven't understood.

Later clarification from Alippo

Individual help is difficult to conduct because of large class and also depends with the type of work given. It works effectively in ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION sums.

When they come to methods its when some find problems. They are helped after giving the work. I start going round helping as they do the exercise.

In *Standard 7*, Brenard used tests as part of the needed practice for the *Standard 8* examination.

You give them regular exercises, or tests or whatever, weekend tests, terminal tests, everyday work, they can understand what they are doing. Doing that everyday they will do better in *Standard 8*.

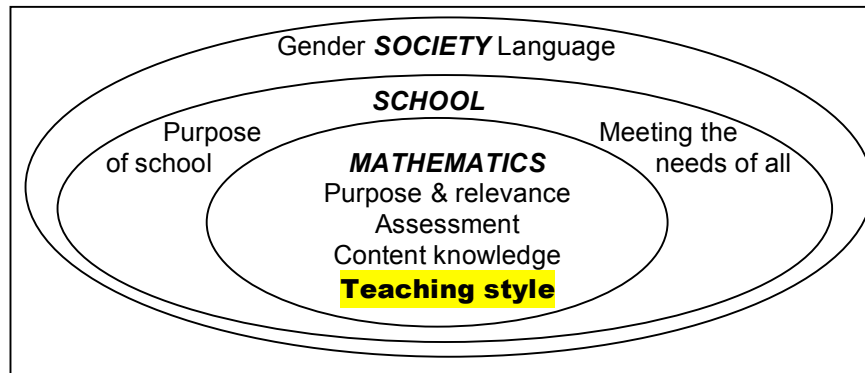
6.8.6 Summary of results on assessment

The PIF, the official policy document (MOESC, 2001) clearly supports both 'poverty alleviation' and the present system of the *Standard 8* selection examination, managed by MANEB. The only policy concerns were with cost-efficiency, and reducing cheating. This has created a practice in which two weeks at the end of each term are taken up with examinations, correction and consequent feedback.

Many educators expressed concern that the examinations were actually strongly distorting the education system. An alternative, called 'Continuous Assessment', was being planned along with the introduction of the new courses (PCAR). This will be discussed in [section 7.7.3](#), as it looks to the future.

From the teacher's point of view, regular testing and end of term examinations are what is expected, and are what they do. There was some evidence that my use of the term 'understanding' in relation to mathematics meant little more than 'testable skill' in the experience of most teachers. They use regular marking of student work, but because of class size this must be minimal. In the classroom, teachers I observed seem to be quite adept at using questioning to assess pupils' progress and to modify teaching procedures.

6.9 Teaching style



This section deals with issues regarding styles and purpose of class teaching, particularly of mathematics.

6.9.1 Policy

The ‘policy’ on the teaching style expected in mathematics teaching appears as the introductory statement to the 1991 ‘Primary School Teaching syllabus, Primary Mathematics’.

The teaching syllabus has a section on the suggested teaching and learning experiences. These experiences refer to the interaction between the learner and the external environment to which he reacts. For a meaningful learning experience to occur, the learner must be engaged in some form of activity. (MoEC, 1991, p. 2)

This is followed with a list of 34 quite specific ‘teaching and learning materials’, including Dienes’ Multibase blocks, card games, clock faces, etc. This syllabus was designed about 14 years previous to my visit, but was the only document with any authority in schools at the time of my visit. It was what teachers were ‘expected’ to follow in 2005.

6.9.2 Interviews with educators

Rather than discuss the particular aspects of pedagogy that needed development, my relevant discussions of pedagogy with educators focused on two aspects of teacher preparation: the various pre-service teacher training programs and the INSET needed to support continuous teacher development. These categories have tended to overlap in Malawi as many teachers begin service totally untrained and do their ‘pre-service’ training ‘on the job’ through inservice means.

In addition this section will report briefly on interviews concerning the teaching method innovation called TALULAR.

Pre-service programs – past, present and future

There are a number of pre-service programs that have been run at Teacher Training Colleges in previous years. The Malawi Special Teacher Distance Education Program (MASTEP) was the first attempt, begun in 1987. Initially a two-year program combining college and distance education components was offered.

Mr Kanjala helped by supplying an historical overview on MASTEP.

This had a residential aspect, but with more time in schools often in their districts to teach next to their homes. The belief was that they would be in a class attached to an experienced qualified teacher on a daily basis, teach under that one’s supervision and the head would also come in, observe the lessons, take comments provide feedback, and the teacher would come out ‘super’.

But it didn’t work! Because our trainer was not motivated enough to sit back or report or provide the feedback. That was not done. The lack of motivation for these people proved disastrous. In many schools there were not enough qualified teachers. If in a school there were three qualified teachers with eight classes, the trainee would end up being given a class of his own. He is now behaving like a

qualified teacher, but he is not qualified and there is no-one to help him.
(Kanjala, interview, 2005)

Mr Phiri, from the Department of Teacher Education and Development (DTED), gave me more background. Despite having eight primary teacher colleges, the output was not great enough. The MASTEP program lasted only three years. So, after a pilot program, the teacher preparation program was shortened to one year only.

They spent only a year in college and went out, and so extracts from the two-year program were put into the one-year program. They left out academics, assuming that people who have gone through secondary school would have some ideas. They concentrated on how to teach instead of what to teach. That was the beginning of problems.
(Phiri, interview, 2005)

Mr Phiri continued the story. The vast sudden increase in number of pupils in schools after the declaration of Free Primary Education (in 1994) led to a dramatic shortage of teachers. Over 20 000 unqualified 'teachers' were recruited from those who had at least a two-year certificate of secondary education.

We came up with a program to take care of the mass-recruited teachers, and slowly training them after giving them an initial orientation. This program had to scale down what to put in there. It was still drawing from the program for the two-year curriculum, but it had to scale down the material that was covered. Mathematics was one of the subjects that suffered in this competition. There has been more methodology than academics.
(Phiri, interview, 2005)

This was called the Malawi Integrated Inservice Teacher Education Program (MIITEP). It first operated in 1997 and was just being wound up in 2005. (See section 2.3 for more details.) Mr Phiri explained that the handbooks showed how to develop concepts, and were very good for those who already had the concepts, but for those with a 'poor background' (and these were 'in the majority') this approach was 'disastrous'.

Mr Kanjala explained what happened in practice. The initial training was three months long, and then they went out to schools. During that time it was intended that they be engaged in many inservice education programs.

It was integrated because people felt there would be sufficient financial resources. And now we would have the support of the District Education Office [DEO], who would organise district inservice activities for the trainees to cover certain aspects of the non-residential materials in the district. These were materials to be covered while teaching in the schools. The DEO with his inspectors would help to inservice the trainees. Money would be there, and there would be money for the head teacher to whom this trainee is sent, so he can go into the classroom, observe lessons, and fill evaluation forms and send these forms to the college [TTC]. There were also forms for the classroom teacher to use and send to TTC. It was going to be nice, but it met the same problems as the MASTEP program, because whatever the people were promised was not delivered. So again there was no motivation or incentives for people to do anything. And again teachers found themselves alone in classrooms, unsupported.
(Kanjala, interview, 2005)

Mr Phiri believed that the quality of teaching in a classroom is dependent on the quality of the teacher's previous experience as a learner.

We have a problem with people understanding of how to teach because they have not been properly developed partly because they themselves were not properly taught. And this chain is now like a vicious circle, because if you did not have a good teacher yourself, you cannot teach others well, unless by some chance you have discovered some things which are not easy to come by.
(Phiri, interview, 2005)

Continuous teacher development

The Malawi School Support Systems Program (MSSSP) started in 1999 and offered support for Primary Education Advisors (PEAs) and senior staff. It ended when funding from the UK Department for International Development (DFID) ran out in 2003. For background see section 2.4.3.

DIFD began to support Malawi to provide inservice to PEAs. With support from DFID we established a program here at MIE to inservice a whole team of zonal trainers – the PEAs – with the hope that they would go back to their zones in their districts to inservice classroom teachers. The DFID constructed Teacher Development Centres (TDCs) in each of the zones. So the inservice we developed trained them to run inservice programs, find out the needs of teachers and inspect schools. ...

In the last week we also invited at least two people from each zone and let the PEA train them in headship... Back in their zone for five months they were supposed to have a program to train senior school staff, head teachers, ... and we go there to provide support and monitor their activities. Then this pattern is repeated.

(Kanjala, interview, 2005)

According to Mr Kanjala, the hope was that this would kick-start a strong support program for teachers using the TDCs in their zones. Teachers are supposed to take three days per year of inservice training at the local TDC. However Mr Kanjala revealed that ‘we found that more than 90% of the TDCs were inactive, despite having the structures there, despite having the personnel there, and we have been wondering why.’

One would expect that teachers would be adequately supported by the PEA who is there in their midst. But visits, discussions with various groups of people, exposed a number issues that need to be addressed. One of them is [lack of] support right from the Ministry – that are not supportive enough for this program.

(Kanjala, interview, 2005)

Mr Kanjala outlined a number of the particular administrative reasons for the lack of activity from PEAs.

After training them you give them a certificate and hope that they will use the training you have given them in their workplace. But only Jesus managed that – he told the disciples to spread the good news. He went away to his father, and left them to do the job. We should have been on their toes, work with them, support them, continually, and give them support – such as short booklets they could use with teachers – at least the first few steps. We should not have left them on their own.

(Kanjala, interview, 2005)

Teaching And Learning Using Locally Available Resources (TALULAR)

The ‘locally available materials’ approach is basically hands-on learning, in which the pupils are enabled to improve their chances of understanding by using physical aids to learning rather than written abstractions.

They were keen to promote other aspects of classroom management, such as ‘job card boxes’ and group work, that make it possible for teachers to let pupils do the learning, rather than just the listening.

TALULAR is not just for the teacher to do. It is an idea that, if the students take it on board themselves, they will be the collectors, they will be the ones who are experimenting outside, and they might gain in a short experience of time, more experience than the teachers. They will do it as play.

(Byers, interview, 2005)

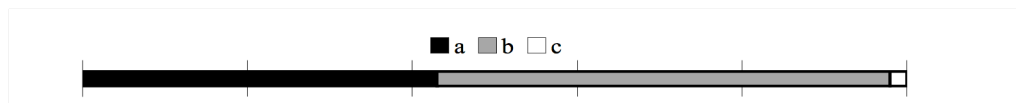
6.9.3 Survey results

What teachers report about how they teach

The following question asked about teaching style; the key words were ‘understanding’, ‘practice’ and ‘exams’. In this question the word ‘understanding’ appears again, as it did in a previous question about assessment (section 6.8.3). Below I explore the likely meaning of ‘understanding’ to these teachers.

How do you teach mathematics?

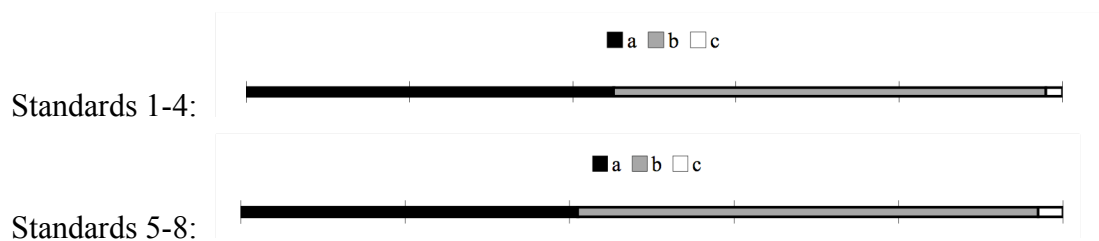
a	I involve pupils in activities to develop their understanding.	43%
b	I demonstrate to pupils how to do problems, and make them practice.	55%
c	I make pupils memorise facts so they will do well on exams.	2%



Here there is a split between those who chose ‘understanding’ as a goal and those who chose ‘practice’, with more choosing practice of demonstrated problems than understanding. Significantly, almost no-one reports that they teach pupils to memorise facts for examinations.

So is there a difference between the lower and upper levels, probably due to a difference in examination focus?

How do you teach mathematics?		Std 1-4	Std 5-8
a	I involve pupils in activities to develop their understanding.	45%	42%
b	I demonstrate to pupils how to do problems, and make them practice.	53%	57%
c	I make pupils memorise facts so they will do well on exams.	2%	3%



There appears to be no essential difference between teachers at lower and upper primary school in what they say they do. The split between ‘developing understanding’ and ‘demonstration then practice’ is widespread.

I believe this is evidence that by ‘understanding’ most teachers mean ‘instrumental understanding’ or being able to follow directions, possibly memorised ones. When they say ‘pupils understand’ they mean ‘pupils can do the work’. If this is the case, then teachers would see no clear difference between the responses a and b above, and might choose one or the other ‘randomly’.

I looked at the relationships between the assessment styles (reported in section 6.8.3) and the teaching styles. The table shows the links.

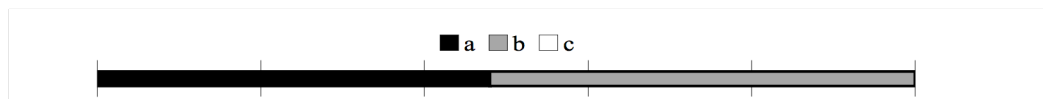
Assessment styles	Teaching Styles		
	Demonstrate & practice	Understanding	Both practice & understanding
Understanding	1 (1%)	3 (4%)	3 (4%)
Tests	32 (39%)	24 (29%)	8 (10%)
Both tests & understanding	0 (0%)	1 (1%)	5 (6%)

It seems that for most teachers, the meaning of ‘understanding’ is something that can be assessed in a classroom test. Almost all those teachers who say they teach for understanding only assess with classroom tests. I therefore deduce that for most teachers ‘understanding’ means skill-based performance.

What teachers report about how they would like to teach

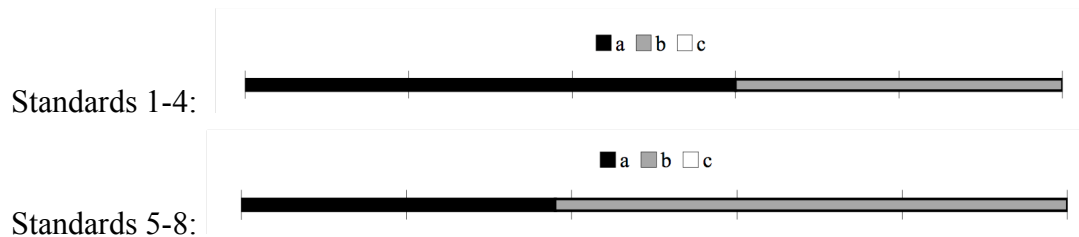
The wording is given below, with the responses from 83 teachers.

How would you like to be able to teach mathematics?		
a	I would like to involve pupils in activities to develop their understanding.	48%
b	I would like to demonstrate to pupils how to do problems, and make them practice.	52%
c	I would like to make pupils memorise facts so they will do well on exams.	0%



An even more definite split between the two alternatives: understanding and practice! So are lower levels different from upper Standard levels?

How would you <i>like</i> to be able teach mathematics?		Std 1-4	Std 5-8
a	I involve pupils in activities to develop their understanding.	60%	38%
b	I demonstrate to pupils how to do problems, and make them practice.	40%	62%
c	I make pupils memorise facts so they will do well on exams.	0%	0%



The majority of teachers at Standards 1 to 4 would *like* to teach for understanding (16% more than actually say they do that), while at upper level teachers would *like* practice of demonstrated problems (8% more than say they actually do it). No-one is saying they *want* to teach memorising for examinations, not even the very few who say they do it.

What teachers think is policy

The wording of the question on the questionnaire is given below, with responses from 83 teachers.

How does the Ministry want you to teach mathematics?		
a	Involve pupils in activities to develop their understanding.	57%
b	Demonstrate to pupils how to do problems, and make them practice.	42%
c	Make pupils memorise facts so they will do well on exams.	1%



The majority believe that the Ministry wants them to teach for understanding, and almost no-one thinks the Ministry wants them to practice for exams.

There is no difference between lower and upper levels when it comes to their belief in what the Ministry wants them to do. It matches the results for what the lower level teachers would *like* to do, but is the opposite of what the upper level teachers would *like* to do.

The opinions about Ministry expectations of my six observed teachers were split evenly between understanding (Patricia, Gift and Alippo) and practice (Mary, Brenard and Ralph). Only Ralph acts differently to what he believes the Ministry wants, and his actions are consistent with what the majority believe about Ministry policy.

Some teachers using demonstration and practice believe the ministry prefers them to teach for understanding: the difference is 17%. However as we have seen there are many upper level teachers who would *like* to place more emphasis on demonstration and practice than what they believe the Ministry wants of them; this difference is 22%. Brenard is included in this latter group.

6.9.4 What teachers were observed to do

For each teacher I have reported which alternative they chose in the question above. This might assist us to understand what meanings the teachers gave to ‘understanding’ and to ‘practice’.

At *Standard 1 and 2*, Patricia had a vast sea of small faces before her (up to 130 in Standard 1 and 113 in Standard 2, although the numbers varied both daily and even during the lesson). On the questionnaire, Patricia voted for *understanding*. Her presentation lessons went for 30 minutes of continuous teacher-led demonstration and question-answer. As I watched, it was clear that the attention levels of many children were small. She tried to overcome this by asking many questions, sometimes insisting on raised hands, and usually choosing one from the forest of raised hands. Children who chose not to raise a hand were sometimes named to give a response. There were many opportunities for chorus responses that generally had most, but not all, children joining in. Lessons either started or ended with a song.

I also observed Patricia teach a 30-minute ‘practice session’ with 93 pupils in Standard 2. This had a much shorter introduction, at the end of which she wrote problems onto the board. Those pupils who had exercise books worked out the problems in their books, although many had no books. She moved around the class quickly correcting work. This meant that faster workers got feedback but those who had not finished the board work received no feedback. She made the comment several times to the class as a whole that they should hide their corrected work, so that others ‘cannot harvest where they did not sow’ (translated from Chichewa by Grames Chirwa).

At *Standard 4*, Mary used her time by running a 10-minute teacher-led session and then breaking the pupils into groups. On the questionnaire, Mary voted for *practice*. The class was then seated in six groups of from 8 to 12 pupils, but many pupils did not take part in the group activity. They used dried maize seeds to help them establish multiplication facts (both the meaning using groups of seeds and the answer by counting them) and built these results into a more complex problem involving multiplication of money. I observed that boys tended to take the lead, and many girls either sat and watched, or used the time to copy from the board into exercise books. During the group work Mary spent much time talking with small groups and helping them make sense of the complex arithmetic they were doing at the time.



Photo
6.11

At *Standard 5*, Alippo showed me three quite different lessons, with a common style of teaching. On the questionnaire, Alippo voted for *understanding*. All lessons started with a teacher-led question-and-brief-answer session, followed by either individual work or group activities, and a conclusion tied it together. She used monitors to give out the required materials. When pupils worked individually there was the same dilemma in correcting, whereby the fastest pupils got feedback and assistance if needed, and the others got neither feedback nor help.

Later clarification from Alippo

We use group work, pair work and peer assessment to assist both fast pupils and slow pupils so that all are helped. Most of the days, all those who have not done well are detained for 30-35 minutes to do corrections and assignments are given to them to be marked in the morning before starting teaching.

At *Standard 7*, Gift used a similar pattern: a teacher-led introduction followed by group work. On the questionnaire, Gift voted for *understanding*. He showed a considerable dramatic flair in his presentations, and had pupils entertained as well as attentive. He often rewarded good responses from pupils by saying 'I like that – beautiful – clap hands for her' at which the class used a special clap routine that kept them all involved. (What he did not do was to say why he liked a particular response, or to ask the successful pupil to explain to the class how they got the answer. I believe this action might have helped the others, who possibly still had no idea why a certain answer was 'beautiful'.) Sometimes he used four groups of about 16 and at other times 16 groups of four. The general level of involvement in the smaller groups was much higher.

Later clarification from Gift

It is really good to ask one to explain how he/she found that correct answer to help those who got wrong answer, in my teaching I failed to do that because of the short time, sometimes Mr. Lowe was against time to supervise another teacher in other classes, due to that, I failed to ask how one got that answer. In real teaching, I do that to ask one who gave me the correct answer to explain how she/he got that answer.

I used two systems of groups of 4 and 16 groups to the different work given to pupils. When the work need much thinking there is need to group students into small groups to allow students have wide discussions, when the work not need much or is less involving thinking, I used more or 16 groups I knew that pupils will share the questions easily.

At *Standard 7*, Brenard had 56 pupils sitting in rows, three per desk. On the questionnaire, Brenard voted for *practice*. He lectured without getting any feedback, and occasionally asked trivial questions. On many occasions he asked 'Is that clear?' No-one said 'No'! If he got a quiet 'Yes' response to this question, possibly indicating that to many it was not clear, his reaction was to ask the question again, and this time he got what he hoped for – a loud chanted 'Yes'. His next question was always 'Are there any questions?' to which the chanted response was always 'No'. He assigned questions from the textbook and pupils worked individually – they were not allowed to discuss the work or help one another. The 56 pupils in Brenard's class meant that in the 35-minute sessions he could not correct the work of all students, so that only the more able pupils received feedback. At the end, he asked how many got them correct. Even if most or all were correct, he still worked them out on the board to end the session.

Also at *Standard 7* Ralph taught 50 pupils quite differently from Brenard. On the questionnaire, Ralph voted for *understanding*. He asked a planned series of questions that kept all pupils involved because he asked individuals by name. My notes record that he chose a boy who was 'doing something else' and got him reinvolved in the lesson through a question. He asked many pupils to come to the board and show how they would do a question, and explain to the class what they had done. If it was incorrect, he asked another pupil to explain why it was wrong. His use of questions seemed to be aimed at getting all pupils to figure out the method for themselves and to put it into their own words. His

questions were not based on 'reading the teacher's mind', but on the use of 'real materials' (in one demonstration he used stones) and mathematical reasoning about them.

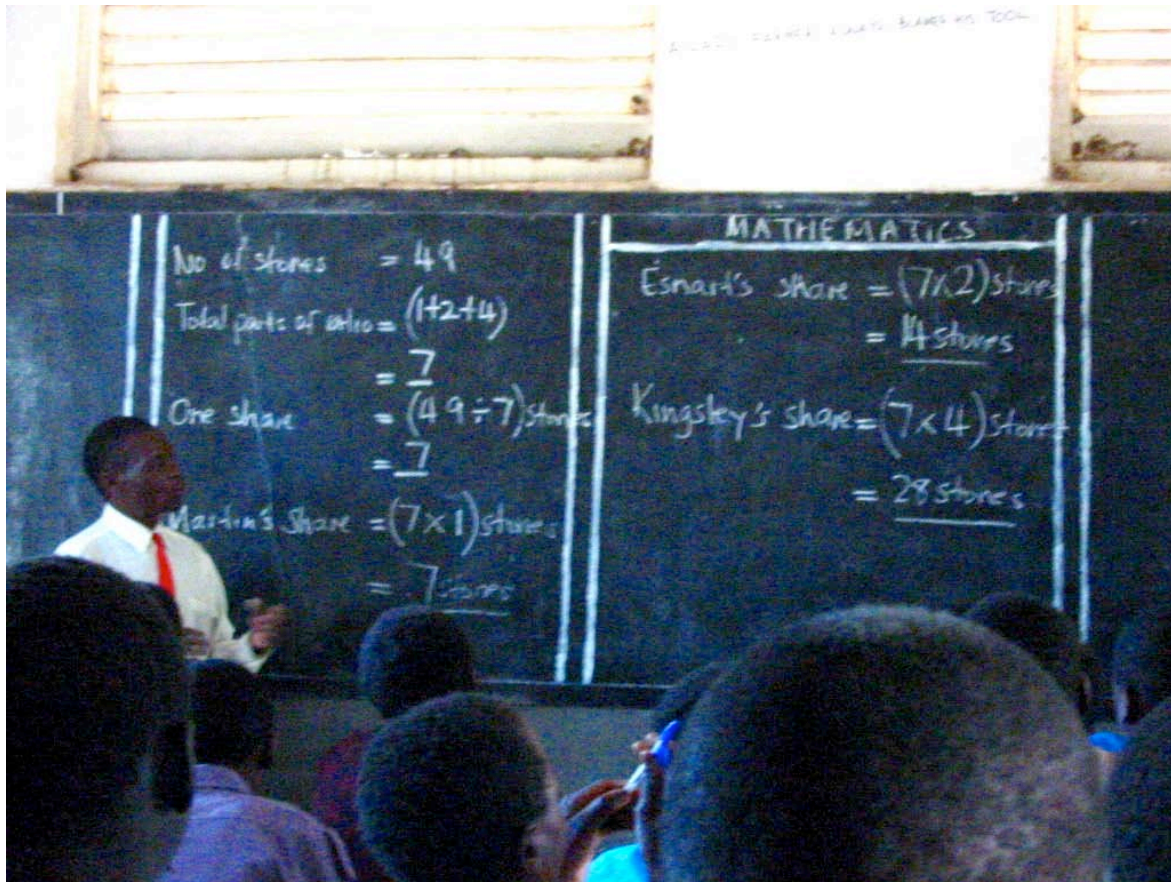


Photo
6.12

In the following table I attempt to classify some of the teaching styles I observed. These labels inevitably over-simplify a complex reality, but serve to illustrate the range of teaching methods in use with just six teachers over 21 lessons.

Teaching method observed	Patricia	Mary	Alippo	Gift	Brenard	Ralph
Telling & use of board	√	√	√	√	√	√
Demonstrating with materials	√	√	√	√	√	√
Questions: factual	√	√	√	√	√	√
Questions: procedural (what?)		√	√			√
Questions: explanatory (why?)						√
Summarising	√	√	√		√	√
Group work: in rearranged seats		√	√	√		
Group work: out of seats			√	√		
Individual activity with material	√		√			
Game: rote learning	√		√			
Individual work: board or book			√	√	√	√

The range and diversity of teaching methods in this small group of teachers is considerable. Any suggestion of a stereotype that limits teaching to rote learning methods is quite out of place.

In summary there were a large range of pedagogical styles used by the teachers I observed. Except for Mary and Ralph, both incidentally from the same school, there was little emphasis

on making sure all pupils were involved and focusing on meaning of what was being taught. In most classes, while teacher presentations were taking place the teacher talked most of the time and only low-level questions were asked. Several teachers used group work as a way of involving pupils, but with very large groups this seemed ineffective. When seat-work in exercise books was taking place, pupils were not allowed to help one another so the opportunity for constructive peer assistance was lost. The large class sizes prevented the teacher from even correcting the work of everyone, and hence slower pupils received no feedback. Many teachers found the book-correcting in a large class such a demand on their time that they had no time left to help individuals who got things wrong.

6.9.5 Interviews with observed teachers

At *Standard 1 and 2*, Patricia's questionnaire response said that she would like to teach for understanding. Patricia has two years of teacher training. Patricia said it is 'possible for her to have the children doing group work' but it is something she has 'never done'. She would have to take them outdoors as the small room is too crowded. She always corrects the work of the faster children first, and gets to the others if there is time – but that rarely happens. Her class has only five text books for over 100 pupils.

Later clarification from Patricia (as translated by Grames Chirwa)

Patricia indicated that she had never used group work mainly because of shortage of Maths textbooks. She said that the activities for group work are found in the textbooks and if she could put the pupils in groups and have one textbook in the centre circle of the group, most of the children would not have access to it.

At *Standard 4*, Mary said that she would *like* to teach for understanding, though she reported that she *actually* teaches for practice. This may be evidence that she means 'instrumental understanding'. She has three years of teacher training. She acknowledged that what she was saying paraphrased what she had been told by the Primary Education Advisors and others. Mary makes specific use of 'smarter' group leaders to help explain difficult ideas to the other pupils. 'For the teacher it is easier – for example group leaders collect the work of the group and bring them to the teacher', and they can help to 'share materials within a short period of time'.

Group work is good because it lessens the work for the teacher, and [in the other way round] it enables more people to learn in the group, other than listening from the teacher – maybe a few can grab what they want. But if you teach as a group those group leaders will pass whatever information you give and it can be easier for others to learn themselves. They may fear the teacher and not understand what she is saying, but within themselves they can learn together much easier.
(Mary, interview, 2005)

Mary's groups were very large, from 8 to 12 in each group. Then Mary's role is to assist the group leaders. I made the suggestion that the groups might be more effective if they were smaller, as even the smallest group of eight pupils had naturally split into two subgroups of four. She agreed that smaller groups might be more effective, but had not tried that method to that time.

Later clarification from Mary

The word 'smarter' should be fast learners, used as leaders in order to assist fellow pupils. In that way they play an important role on behalf of the teacher for it becomes easier for the teacher to work with small groups as other pupils are busy with their work. Group leaders also help to collect fellow pupils' work at the end of the lesson for assessment by the teacher and also to distribute teaching and learning aids, in the course of teaching.

At *Standard 5*, Alippo would *like* to teach for understanding and reports she does that. Alippo has two years of teacher training. Alippo uses group work for activities that work best in groups, such as measuring, and making things.

At *Standard 7*, Gift's questionnaire response said that he would *like* to teach for understanding and that he does that. Gift has only one year of teacher training. I asked him why he used group work.

The goodness of group work it gives the chances to pupils to think whatever they think ... and to explain to their friends what they think is the answer, and at the same time they are learning together because they are discussing at the same level. So it gives equal chances to pupils because almost everyone contributes. But when I am teaching in a class situation it is a problem because you only teach them and you don't notice that someone has got a question. Then she will ask her friend 'What is this?' But when the teacher comes she stops talking because she is afraid that she is giving the wrong answer. But the goodness of groups is that it gives time for them to talk on their own.
(Gift, interview, 2005)

So Gift uses groups in order to help those who have understood his teaching to share their ideas with others and give those who don't understand a chance to learn from the others.

At *Standard 7*, Brenard's questionnaire response said that he would *like* to teach for practice and says he does that. Brenard has only one year of teacher training, although he has risen to Principal rank. Brenard's lessons always follow the same routine. I asked him to describe the pattern he followed.

First of all I do a lot of mental arithmetic as an introduction, and then I go detail into the topic. And before giving them an exercise I give them examples of how they should do the sums. After doing the examples then I go on giving them sums to write to show that they have understood the lesson. Then I am also helping, while they are writing, wherever there is a problem and at the end I make correction together.
(Brenard, interview, 2005)

He worked the questions out on the board at the end, even on a topic where all pupils had got it right. 'That is so that the topic will stick in their minds' he said.

I put this proposal to Brenard: 'You often say 'Is that clear?' and they all call out 'Yes!' I am not sure that you believe them.' His response was: 'When they call out they say Yes, and this is not true. They are just calling out with their friends – it's not true.'

I asked him: How can you tell that they understand or not?

When I give them the exercise, and others they got right, and that means they understand they lesson. Others they got wrong, that means they didn't understand the lesson.

At *Standard 7* Ralph voted that he would *like* to teach for understanding and says he does that. Ralph has two years of teacher training. I asked Ralph about his extensive use of questions.

It is not only in ratio, we also do this in other topics – reducing according to cancellation, to come up with smaller numbers. So that is why I kept on asking them, so that they can remember and do it in other topics.
(Ralph, interview, 2005)

I referred him to his careful avoidance of saying that pupils are wrong.

Sometimes you have to say 'No this is wrong', but sometimes I just say 'No, let me get somebody to help you'. In that way she or he knows that 'my answer is not correct' and when you say 'just to help you' she or he thinks 'I was about to get the correct answer – and that one is called to help me to finish the last part to get the correct answer'.
(Ralph, interview, 2005)

I posed the difference between *Why* the problem is solved in a particular way and *What* to do to solve the problem.

(laughter!) I wanted them to understand on their own, not to plant my ideas in them, that they could easily forget. Because they struggled to get the answers, I thought that was the best way of letting them come to the correct answers themselves.
(Ralph, interview, 2005)

I have reported two approaches to group work, and two quite different ideas about the pedagogy best suited to teach and learn mathematics. In all cases teachers are struggling to

find suitable ways for pupils to ‘understand’ the ideas being taught. However there are also different ideas (instrumental and relational) about what it means to ‘understand’ something.

6.9.6 Summary of results on teaching style

There is no clear policy about how to teach, although the 1991 syllabus promotes activity methods.

There is a style of teaching promoted by the training program most experienced by teachers: the Malawi Integrated Inservice Teacher Education Program (MIITEP), and maybe this could be regarded as ‘policy’. MIITEP two-year courses started a theoretical component – three months at a college in which the principle mode of teaching was *lecturing*. New methods were promoted, but not used, by the lecturers. These included TALULAR, involving extensive use of home-made ‘hands-on’ materials. The courses did not related to the teachers’ previous experience, despite the fact that many of those starting MIITEP had been teaching for years before starting their training.



Photo
6.13

This was followed by 19 months ‘practice teaching’ in schools, where they often taught full-time without support. The ‘distance education’ component frequently failed to assist them. As a consequence it should not surprise us if many teachers in 2005 taught as they themselves were taught as pupils. See [section 2.4](#) for more detail.

Despite the grim picture afforded by MIITEP – the only substantial attempt to enunciate policy – my results are far more positive. My survey, observations and interviews with teachers suggest that many teachers actually do far more than lecture, and are able to use innovative methods in very large classes. I found evidence of 11 different ‘styles’ within the 18 lessons I observed. Of most interest were the two quite distinct approaches to group work.

However it seems that for most teachers, the goal of teaching is still success on a test, and as we have seen, this seems to be supported by ‘policy’ regarding assessment. For most teachers,

‘understanding’ means no more than ‘skill competence’. Based on my study of teachers’ content knowledge, it is possible that many could have little real ‘understanding’ of mathematics themselves, and many may have no idea that it is possible to ‘understand’ mathematical concepts.

This chapter has indicated a range of responses to the questions that arose in the literature review, and became focused as the research variables. The responses have included comments on policies and practice from educators, survey results from teachers, selected observations and interviews. In the next chapter I state the official policies relating to each of the eight variables and explore the meanings behind these statistics, observations and interviews, comparing them to the official policies. In this way I will explore the relationship between policies that are trying to change practice and the practice itself.