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Gender Appropriate Curriculum Development in Primary Education/Malawi

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ACRONYMS

DEO	District Education Office
FLE	Family Life Education
GABLE	Girls' Attainment in Basic Education and Literacy
GTZ	German Technical Corporation
IDA	International Development Agency
MAMSTIP	Malawi Mathematics and Science Teaching Improvement Project
MANEB	Malawi National Examination Board
MASTEP	Malawi Special Teacher Education Program
MIE	Malawi Institute of Education
MOEC	Ministry of Education and Culture
PAAD	Program Assistance Approval Document
PIU	Project Implementation Unit
PSLC	Primary School Leaving Certificate
TTC	Teacher Training College

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INTRODUCTION

A. Background and Purpose

The GABLE Program in Malawi is concerned with improving girls' attainment in basic education and literacy (defined as access, persistence and completion in primary education). Achievement of this objective is constrained by a number of factors, including widely held attitudes which place a low value on girls' education, and the poor quality of primary education in Malawi. The most difficult constraint is the limited cultural expectations of Malawian society towards girls' capabilities and benefits resulting from their education. Most parents and teachers generally think that girls are less committed to schooling than boys.

Despite some improvements in the recently revised primary school syllabi's content and approach, ongoing instructional materials development is still insufficiently geared to the interests and learning needs of pupils, especially girls. To improve girls' access to quality education, the MALAWI GABLE Program pursues various approaches, including: (1) A social campaign to improve perceptions about the value of girls' education; (2) school fee grants for non-repeating girls in Standards 2-8; and (3) gender-sensitive curriculum development. To implement the third objective, the Government of Malawi (GOM), through the Ministry of Education and Culture (MOEC), has adopted both a plan and budgeting mechanism to develop a gender-appropriate curriculum for use in primary schools, teachers' colleges and in-service teacher training, by establishing a Gender Unit at the Malawi Institute of Education (MIE).

The objective of the consultancy was to provide technical assistance to help design and implement a work plan for the Gender Unit. The lecturer of the Gender Unit will complement and cooperate with the curriculum development staff currently developing and trial testing primary education instructional materials, such as pupils' books and teachers' guides. More specifically, the consultancy aimed at: (1) assisting the Gender Unit at MIE to design and implement a work plan to develop a gender appropriate curriculum for use in primary schools, teacher training colleges (TTCs), and in-service teacher training; (2) identifying requirements for staff, office facilities, supplies and materials, and additional technical assistance to implement the program planned for gender appropriate curriculum reform; (3) assisting the Gender Unit in setting and meeting implementation targets for each program year; (4) conducting in-service training courses for teachers to change their attitudes so that they can become sensitized to gender issues in primary school classrooms; and (4) designing a training program and guidelines for TTCs to build abilities and skills of teachers to address gender issues in primary schools.

B. Methodology and Approach

The present report is based on various sources, comprising the findings of the consultancy to the MIE in September/October 1992 and discussions with institutions and persons involved either in providing teacher training, orientation and supervision or developing primary education instructional materials (i.e., MIE, MOEC, MANEB, TTCs, DEOs, and Chancellor College). Literature on the topic consulted for this report is presented in the bibliography. The report also greatly benefited from various policy related papers and documents prepared for the GABLE/PAAD and the MIE/GTZ Primary Science Project.

The report was produced according to the terms of reference for the consultant to the MIE Gender Unit (Annex 2). Given the nature of curriculum development and implementation, the technical assistance requires a series of follow-up visits. Therefore, training papers and guidelines for incorporating and integrating gender considerations in the design of curricula and teacher training methods, as well as the criteria for gender equity in new curricula should not be considered as finished products. It is expected that they will evolve over the GABLE program period (1992-1996), as the professional activities carried out by the Gender Lecturer at the Malawi Institute of Education (MIE) are integrated.

C. Organization of Report

This report is organized in five sections. Section I presents an analysis of policy and institutional constraints to female participation and persistence in primary schools in Malawi. It includes (a) list of factors identified as having a differential impact on female participation in schools and (b) recommendations for changes required in primary schools to increase girls' persistence and achievement.

Sections II, III, IV, and V present respectively (ii) an analysis of teacher training and some guidelines, (iii) an analysis of gender-appropriate Malawian primary textbooks and some guidelines, (iv) guidelines for curriculum writers' workshops, and (v) criteria to be integrated with MIE evaluation manuals. An updated workplan for the GABLE Lecturer at MIE, the terms of reference for the consultancy and a trip report are presented as annexes.

I. Advancing Girls' Attainment¹ in Basic Education and Literacy in Malawi

1. Primary school-age girls in Malawi experience many obstacles in remaining in school once they get there. This analysis focuses on policy and institutional constraints that inhibit girls' participation in education. It examines gender differences in educational participation and attainment, and estimates the extent to which the gap between female and male students' attainments has declined with the expansion of educational opportunities. The objective is to identify key policy and institutional constraints to female participation and persistence in primary schools, including (a) list of factors identified as having a differential impact on female participation in schools and (b) recommendations for changes required in primary schools to increase girls' persistence and achievement.²

National and Local Constraints to Female Participation and Persistence in Primary Schools

2. The Government faces tremendous problems in increasing access to primary education as well as its quality and efficiency. Constraints to improvements in primary education include inefficient and extremely limited use of resources, lack of classrooms, teachers, instructional materials and effective curriculum implementation. In urban areas the classroom/pupil ratios reach 150:1 or more. To reduce such high ratios, a multiple shift system has been introduced in some crowded schools, but without any consideration of how it affects curriculum implementation. In fact, there has been scant evaluation of educational practice at the national, district or classroom levels.

3. Currently there are about 1.3 million children in Malawi's primary schools. This represents a gross enrollment of about 65%. The net enrollment rate is 51%.³ Government's goal is to increase the net enrollment ratio to 75% by 1996. Girls' net enrollment rate is about 47%. In standard 1, almost as many girls as boys are enrolled. The age of initial enrollment also affects girls' persistence in school. Getting girls in school even a year earlier seems to improve their chances of staying in school. In the southern region of Malawi, girls' participation rates are among the lowest and their drop-out rates the highest. Schools are not in easy access and lack educational materials and classroom furniture. Access to secondary education is limited to about 5% (Chakravarti, 92).

4. Access, persistence and achievement vary widely by region. About half of the children who enter school leave before they finish Standard 4 and have acquired basic literacy and numeracy skills, given the poor learning conditions. More girls than boys drop out. In Standard 1 over a third of the pupils drop out of school (about 20% of the girls and 16% of the boys). Though 64% of 6 to 13 year olds

¹ Defined as access, persistence and completion.

² The report draws on available qualitative and quantitative data as well as discussions with key professionals in the Malawian education community. The data available give some understanding of the obstacles that girls in particular face in securing basic education. These include parents' and teachers' attitudes and opinions about girls' participation in education, the academic potential and performance of girls, and reasons for the high female drop-out rates in primary school. The report also benefited from the ABEL Research Study on "Educating Girls: Strategies To Increase Access, Persistence, and Achievement (1991).

³ The 6-13 years age range is considered to be the group eligible for primary education.

attend primary school, half drop out before completing four years of schooling and only 24% of Malawi's primary school age children complete school.

5. Economic constraints and sociocultural attitudes and norms toward girls influence whether a girl ever has an opportunity for basic education and how long she remains in school afterwards. Education in Malawi is not compulsory at any level and requires tuition fees as of third grade at primary school. GOM recently waived tuition fees for Standards 1 and 2. In 1992, tuition fees were K 4.50 per pupil as of standard 2 and K 7.50 as of standard 6. However, many girls drop out of school because their families do not have the necessary cash. Since education is not fully subsidized by the State,⁴ a child's educational opportunities depend on the economic resources of his/her family to cover school fees such as uniforms, and instructional materials. Pupils must provide their own reading and writing materials, estimated at K 12.00 per year. A complete uniform for boys may amount to K 10.50 and K 15.50 or K 22.00 for girls.

6. Marriage and pregnancy are also causes of high drop-out rates among Malawian girls, but are not as significant as other causes (Ilon, 91; see Annex 4).⁵ The average marriage age for girls in Malawi is 17.7 years; in some areas it may be 15.5 years. MOEC policy requires pregnant students to leave school at any level. In some parts of Malawi initiation rites are still valued more than formal education.⁶ Early marriage and likely pregnancy also conflict with Ministry of Education's policy which bars all pregnant girls from school. Family life education in schools and at home for both boys and girls would be useful.

7. Primary schooling lasts 8 years and comprises 12 subjects including Arithmetic, English, Chichewa and Science. Many primary schools now offer a more practical curriculum, such as craft and technology courses to boys, and needlecraft to girls up to Standard 2. By 1993/94 this will be extended up to Standards 3 and 4. At the end of primary schooling, students pass the Primary School Leaving Examination in 6 subjects.⁷ While both boys and girls show low levels of attainment of primary

⁴ In the current 1992/93 estimated budget, education represents almost 14% of the GOM's recurrent expenditures. For the same year, the primary education sector receives about 49% of the education recurrent budget. GABLE conditions require the GOM to increase by a minimum of 1% each year during LOP the total GOM allocation to the education sector, and by 4% each year primary's share of the total education budget.

⁵ Lack of cash for school fees and uniforms was the most frequently cited reason for girls dropping out between Standards 1 and 2. When investment for a girls' education is weighed against the need for a daughter's household labor, the latter is apt to take precedence. Hunger may be another cause for why girls drop out of school in the lower grades.

⁶ R. J. Banda (1984) *Western Education: A Corroding Factor on African Traditional Life*. Zomba: Chancellor College.

⁷ English, Arithmetic, Chichewa, Agriculture, Science or Home Economics, and a General Paper pertaining to History, Geography, and Civics.

education, girls' attainment is generally lower than boys'. Girls in rural areas have few vocational options other than getting married or becoming subsistence cultivators. Once they complete primary school, they will have few chances for educational advancement.

8. Primary repetition is high in Malawi. Almost one-quarter to one-fifth of all pupils repeat. In Standard 1 about 25% of pupils are repeaters. Repetition in Malawi is both a symptom and a cause of failure. Failure for pupils to learn the subject matter required by the curriculum within the allotted time, and failure for them to gain entrance into a few available Form I places (secondary school). On average, one out of five pupils repeat, but repetition rates are highest in Standard 8 (50%). Indeed, the selection procedure into secondary school has a lot to do with the high repetition rate at Standard 8. It also increases the unit cost of providing education (estimated at at least MK 1.9 million), but enables only a slight increase in overall attainment. By increasing class size, however, repetition reduces instructional quality and increases the likelihood of dropout. Repetition patterns for boys and girls are similar, although girls repeat Standard 8 slightly less than boys (Williams, 1992; see also para. 37).

9. Persistence of girls has been positively linked to the presence of female teachers as well as to single sex schools. However, women currently represent only about 34% of all primary teachers. Outside the urban areas, nearly 80% of primary teachers are male. At present there are about 18,000 primary school teachers, 16% of whom may be untrained. The others are trained in one of the 8 Teacher Training Colleges (TTCs), six of which are Government owned. Total training capacity is about 3,000. At least one third of the places at TTCs should be available for women applications even if they have credentials slightly lower than their male counterparts in view of the shortage of qualified women. However, it is difficult to attract male candidates, and the vacancy rate at Lilongwe TTC is currently 20%. The vacancy rate is also partly due to the fact that teaching is not a popular profession. Moreover, the regional policy (1989) imposed by the Government requires teachers to return to their region of origin. The impact of this policy on student/teacher ratios and the quality of education is unclear. The shortage of teachers is highest in rural areas (Chakravarti, 92).

Constraints to Female Participation in Primary Schools

10. The education system as a whole, as well as the social and family environment, has a differential impact on girls. Various explanations have been advanced to explain why girls lag behind boys, such as gender-specific sociocultural attitudes and gender-structuring. There are additional in-school factors which reduce girls' participation. Moreover, there is evidence that girls' educational attainments are constrained more by social origins than enhanced by ability. Evidence suggests that structural factors, such as social background, and cultural factors, as well as gender-based stereotypes and expectations, may still shape and constrain girls' educational achievements. For instance, education reinforces attitudes about gender found in the home and community (Davison and Kanyuka, 90). Conversely, education can challenge the way gender roles are represented and structured, offering alternatives to the existing stereotypes that generally view females as less committed to schooling than boys within the African context.

11. The process of gender structuring refers to culturally determined ways of defining women and men and their roles in a given society. For instance, in Malawi, men and women do not commonly mix freely during functions and activities. Seating arrangements, especially in primary schools, can still be based on gender, although mixed seating arrangements are more common. Tasks, games and crafts are all traditionally divided along gender lines (Mwalwenje, 92). While girls are taught household tasks, boys are learning how to build and construct things. This can have an impact on subjects pupils take in

school as well as on career choice afterwards.

12. In the textbooks and teachers' guides, girls are traditionally depicted playing their allocated roles in society as wife and mother. This gender-specific socialization for girls' domesticity is pervasive throughout the curriculum. Moreover, parents' career aspirations for their daughters and the daughters' own aspirations tend to be reflected in the curriculum content. Girls' career choice is generally limited to nursing and teaching, considered socially acceptable.

13. Within the classroom, bias toward educating boys more than girls also exists. Sociocultural expectations are transmitted by reinforcing gender-appropriate behavior implicit in teacher responses to pupils and the academic support given them, as well as curriculum content.⁸ Most teachers identify subjects for girls, such as home economics and needlecraft, although girls themselves may not share this view. An ethnographic study found that teacher prejudice was also demonstrated toward educating girls, considered to be less serious and capable. 90% of the teachers (essentially male) interviewed thought that boys perform better than girls in class and that girls lack ambition and a spirit of competition. Moreover, boys had twice as much time for studying as girls. Girls spent 68% of their time on domestic chores and child care, whereas boys spent only 37.8% of their time on similar tasks (Davison, 92). Female pupils are aware of the academic and attitudinal obstacles they have to overcome in order to succeed in school; and when they approach Standard 8, few, if any, will be accepted to secondary school.

14. Teachers thus play a pivotal role in influencing both their pupils' academic motivation and career choice. Teachers' negative and positive expectations of pupil achievements in class exercises and the national examinations have a direct impact on pupil performance. Teachers' expectations and attitudes toward female pupils critically influence whether girls are encouraged to participate actively in classroom activities. There is scant research on how gender is structured in African classrooms, but some research suggests that the problem of stereotyping girls' acceptable behavior is particularly acute in rural areas. Girls are expected to be shy and submissive.

15. The notion that males are more intelligent and more serious students than females is reflected in the opinions of both parents and their primary school children, as well as textbook images and content. Mothers recognize that their own attitude toward education might negatively affect their daughters' persistence in school. Parental attitudes toward an ideal educational attainment level are also different for boys and girls. There is not only a gender gap between the pupils' aspirations, but also a gap in parental perception about ideal educational attainment for boys and girls, i.e., Standard 8 for boys and 4 for girls (Davison and Kanyuka, 90).

Constraints to Female Learning Achievement and Career Choices

16. Girls commonly underachieve in mathematics and science in primary school, where girls have been commonly assigned to study home economics instead of science as of Standard 5. A similar trend exists in secondary school as regards the general science option. Due to these practices, at least in part, girls in Malawi are lagging behind boys' performance in mathematics, science and science related subjects. For a number of years, the average mathematics pass rate for girls has been less than 30% in contrast to boys' 50% to 60% in both the Junior Certificate and the Malawi School Certificate

⁸ J. Finn, J. Reis, and L. Dulberg, "Sex Differences in Educational Attainment: The Process," *Comparative Education Review* 27 (1983):33-51.

examinations.⁹

17. Similar results are found in the Primary School Leaving Certificate Examinations,¹⁰ where boys do better than girls in terms of overall passes of the certificate. In 1990, 66.8% girls passed in contrast to 77.7% boys. Girls did less well in all subjects except Chichewa and Bible knowledge. The results for each subject are reported in terms of raw mark distributions (an average mark out of 100 for the whole PSLCE, although these are not standardized marks), calculated both including and excluding science, since not all girls take science. In 1990, the mean scores are as follows:

	<u>boys</u>	<u>girls</u>
with science	59%	54.8%
without science	61.7%	54.7%
verbal ability	37.9%	33.4%
numerical ability	33.4%	28.0%

Sources: The Malawi National Examination Board (1990)
and E. C. Kadzamira (1988, 1987)

18. Another study conducted in 1987 reported higher total achievement scores for girls on tests elaborated for it (PSQS).¹¹ The study was conducted in 8 out of 24 districts in Malawi. The extent to which this study is representative for Malawi is questionable. It examines the performance of girls in mathematics and science subjects at MSCE in relation to boys performance and also in relation to the type of school the girls attended. The pedagogical rationale of this research design is not quite clear.

⁹ The Malawi National Examination Board (MANEB) offers two science and two mathematics syllabi at the Malawi School Certificate of Education (MSCE) examination level. These are Biology and Physical Science and Mathematics and Additional Mathematics. All school candidates are required to take Mathematics and either Physical Science and Biology or General Science. The latter is a combination of Physical Science and Biology and has no separate syllabus.

¹⁰ At the PSLC many girls opt for the Home Economics instead of the Science examination because they have not taken science classes or think they are not good at science. To qualify for a certificate, a student must pass at least Arithmetic, English and two other subjects. To qualify for secondary school selection, a student must pass all 6 subjects (see footnote 7). However, this selection is also based on merit by district quota. Some girls are given access to secondary education. A separate merit order list is established for girls. As a result, girls represent approximately 30% of the total number of students accepted to secondary school.

¹¹ Malawi Primary School Quality Study Report (1990). MOEC/Planning and Research Unit/World Bank.

19. Gender differences in examination performance have been linked to the format of examination and assessment techniques. Recent improvements in the examination system have included the introduction of reasoning questions as well as multiple choice questions. These improvements include a heightened awareness of "cognitive in contrast to affective" skills and competencies to be developed among pupils. There is a need to (a) determine how girls and boys perform under different conditions and whether girls do better in the other subjects and (b) explore the attitudes and interests that girls and teachers have in schools towards mathematics, physical science, biology and general science. This kind of research should start at the primary level.

20. Moreover, the reasons why boys outperform girls in mathematics and science may not relate at all to cognitive ability, numerical and spatial tasks, linguistic and verbal tasks. Achievement can be measured and assessed in many ways, and the lower achievement of girls may sometimes be related to the measuring tool rather than actual performance or to the fact that girls repeat Standard 8 less often and thus have had less practice than boys. While repetition may lead to higher scores on the PSLC examination, it is doubtful if this could be considered "increased learning". It may just be increased ability to do well on the exam. Moreover, higher scores in mathematics or English do not necessarily mean mastery either of these subjects or the expected learning outcomes of the primary curriculum because the tests may not have curricular validity. Still others have suggested that: "The problem is not one of the lack of participation in mathematics so much as the nature of mathematical experiences and curriculum offered to all pupils and the way in which mathematics is defined in relation to the gender distribution of power and authority in society" (Burton 1986:16).¹²

21. Class scheduling drives girls out of science and technical classes into needlecraft and home economics. This situation is also found in the higher grades and contributes to the extremely low number of females in scientific and technical fields. The limited number of places in secondary school for girls is another crucial constraint influencing girls' overall academic achievement. A passing grade in mathematics is a prerequisite for entry into various programs such as teacher training and technical colleges. A good grade in mathematics is also an advantage and a requirement for science-based programs at the university level. Moreover, mathematics and the physical sciences act as gatekeepers to higher education, as well as professional careers. Therefore, subjects such as arithmetic and mathematics should be taught innovatively at all levels to stimulate learning and interest in all pupils.

22. There is enough evidence that educational outcomes for girls have a direct impact on their access to secondary and higher education and women's career patterns compared to men's. The increasing use of mathematics as means of selection, combined with the low achievement of girls in the core subjects, severely limits women's further educational and professional opportunities such as teacher training and even nursing (Grant Lewis et al, 90).

23. Although Malawi has a critical shortage of manpower in professions requiring a background in science and mathematics, until now little has been done to bridge this gap, especially to attract more girls

¹² Townsend L. Burton, ed. (1986). *Girls into Maths Can Go*. Holt Rinehard and Winston. New York.

and women into technically or scientifically based careers. Because of their lack of education and training, women are underrepresented in many occupational areas. In secondary schools, only about 30 out of 130 qualified mathematics teachers are women.¹³ The under representation of women in mathematics and science based subjects is also reflected in the number of women graduating from the university in these subject areas from 1967 to 1986.¹⁴

24. Classroom conditions and teaching methods are also major constraints to learning achievement. These include high pupil/teacher ratios, teachers' lack of expertise and the curriculum itself as it appears in textbooks and teachers' guides. Given the impoverished learning environment found in most schools, problem solving, investigational work, and practical work, necessary for effective mathematics and science teaching, is absent. Practical work involves handling concrete materials by students such as teaching aids. However, they are either lacking or few teachers make use of them.

25. Conceptual development in mathematics teaching and learning seems to be a major problem and is an area that requires immediate attention, through research and appropriate curriculum development. Moreover, the shortage of science and mathematics teachers means that they usually have the highest teaching load in schools, which reduces time for teachers to have pupils sufficiently review materials.

26. In addition to these conceptual constraints, a persistent gender bias is found in the mathematics and science textbooks, guides and even examinations (i.e., Malewezi, 1988) that together stifle students' motivation and performance. Analysis of several textbooks (mathematics and science) reveals that they lack a balanced representation of the two sexes and generally have few illustrations. This is likely to influence learning, especially for girls, since it is widely accepted that textbooks can affect how pupils perceive themselves in relation to the subject taught. Imbalances in gender representation are also found in national examination papers. Gender stereotyping is reflected both in the illustrations and the wording of questions (see Section III). Teachers' attitudes towards pupils are closely related to pupil performance in certain subject areas. Teachers' type of feedback and expectations are subtle, but strong determinants of pupil achievement. Teachers often only address one group of pupils (usually boys) during practical work or exercises and drills.

27. Research on performance in single sex and mixed schools has been inconclusive to this date, suggesting that more than one factor contributes to performance differences in performance¹⁵. Results of this study on science education were mixed, depending on the type of schools. Girls in mixed schools had higher mean scores than their counterparts in all girls' schools. The opposite was true for boys. In mathematics, mean scores were higher in single sex schools for both sexes. While many of these research findings are interesting, it is difficult to draw any practical conclusions from them because of

¹³ Chancellor College has recently set its net enrollment target at 50% for the entire Faculty of Education against the total enrollment of the College. Women are currently being encouraged to go into programs that have traditionally been male dominated, such as engineering, medicine, pharmacy, etc..

¹⁴ Bachelor of Science 14%, B.Sc.Engineering 0, B.Sc. Agriculture 7%, B.Sc. Technical Education 0, B.Sc. Honours 31%, Diploma in Engineering 0, Diploma in Agriculture 14%, Diploma in Laboratory Technology 6%, Diploma in Technical Teaching 0.

¹⁵ E.C. Kadzamira. 1987. Sex Differences in the Performance of Candidates in MSCE Mathematics and Science Subjects 1982-1986. Malawi National Examination Board.

the number of variables involved in any teaching learning situation.

28. Discussions with teachers and supervisors suggest that until curriculum development is coordinated with instructional support and guidance at the classroom level through teacher orientation and regular supervision, there will be no effective teaching in schools. Moreover, female teachers should be considered important as role models to teach girls mathematics and science. It has therefore been suggested that, in order to increase the pool of potential female teachers, the quota for females should be increased at TTCs and more places should be created for girls in secondary schools. Moreover, to produce more teachers MOEC must also consider issues such as incentives, career paths, location (urban vs rural), etc..

Ways to Increase Girls' Persistence and Achievement in Primary Schools

29. This section examines some ways to improve girls' educational participation and explores the policy implications of these interventions. While many of the findings would justify gender specific targeting of interventions and further research, the following basic principles should be kept in mind:

(1) Any successful intervention would have to involve changes in classroom behavior as well as in the official printed curriculum. It would not be enough to revise textbooks; teacher training is essential. (2) Permanently increasing the gender sensitivity of the curriculum and school system would involve a long-range process of collaboration rather than a one-shot intervention from outside. Gender sensitivity had to be established as a permanent component of the educational system's culture and practice. (3) Gender sensitivity would be most beneficial if seen as part of the larger issue of helping schools achieve the overall curriculum objectives more effectively rather than simply targeting girls' under-achievement.

30. It is generally accepted that a policy mandate is required to ensure that programs for girls do become part of the national agenda (Tietjen, 91). In Malawi, implementation of such a mandate is facilitated by the ongoing curriculum revisions, instructional materials development and teacher training provided by professional staff at MIE, including a lecturer on gender appropriate curriculum development and implementation. Moreover, a gender unit has been established at the MIE and the professional activities carried out by this unit are being fully integrated with the rest of MIE's work. Thus, the design of a more successful gender sensitive program is possible.

31. In general, research suggests that the issues and factors that affect girls' educational participation differ from boys', and in order to make basic education available and accessible to girls, some strategies must be targeted (Tietjen, 91). For instance, expanding the number of school places is less effective as a strategy to integrate girls. Educational expansion alone has a limited ability to reach those girls who are kept from school for reasons other than constraints on supply, because of differences in the social and economic roles for girls and boys. Single-sex schooling for girls has been shown to improve enrollment, persistence and performance. Staffing schools with trained female teachers may be critical to girls' enrollment and achievement. Scholarships for girls have a dramatic effect on girls' educational participation and out-of-school behavior; also, scholarship programs need only be provided for one generation of girls in order to improve the educational participation levels of subsequent generations of girls. Quality instruction benefits all students, but for girls, who are given few chances to repeat a grade, it may mean the difference between staying in school or leaving school.

32. It is argued in the literature that supportive educational policies are a precondition for improving

girls' educational participation (Tietjen, 91). However, single interventions, such as high-quality and non-biased textbooks do little for girls who are kept out of school. Such quality improvements alone cannot overcome social forces both inside and outside school. Multi-dimensional strategies are required to address constraints to girls' persistence in school. The GOM-sponsored school fee waivers for non-repeating girls in Standards 2-8 and the social campaign to improve perceptions about the value of girls' education are multi-dimensional strategies currently being implemented in Malawi. Such institutional interventions aimed at guaranteeing that girls with academic promise be assured of financial support may actually contribute to increasing their chances of staying in school.

33. Gender-appropriate curriculum development and implementation are other elements of the multi-dimensional strategy pursued by the MOEC and the MIE. Learning is the key policy objective. More specifically, the gender unit at MIE aims at helping girls learn inside the classroom by organizing (a) in-service teacher training courses with a central focus on gender awareness and sensitivity to gender structuring, (b) gender appropriate curriculum development that eliminates stereotypes about students and contributes to attitudinal changes with potentially long term effects.

34. Numerous studies of textbook content of textbooks provide ample evidence of gender stereotypes, such as images of girls and women in traditional and non-egalitarian roles. Despite these observations, however, several studies found no empirical evidence causally linking gender stereotypes in textbooks with low girls' attainment and achievement in school (Tietjen, 91). But this may be due to a lack of evaluation or appropriate measurements and assessment criteria. It is therefore crucial to evaluate interventions and strategies used to improve girls' education. Conventional assessment criteria, particularly achievement scores, may not adequately assess all the interventions targeting girls. Attitudes, aspirations and self-image are important educational outcomes for girls. Thus, evaluation research should also involve collecting qualitative, descriptive, and gender disaggregated data. For instance, research on school quality should consider the ways instruction is carried out and learning is assessed as well as the gender dimension in learning outcomes. Such research should also focus on cultural support for curriculum goals and modern teaching practices. This issue merits further analysis.

35. In spite of these concerns, some countries have been undertaken massive programs to neutralize or eliminate gender stereotypes from school materials (i.e., China, India, USA). The Primary Education Curriculum Renewal Project in India has emphasized the development of a competency-based curriculum for primary school directed exclusively toward the acquisition of certain basic competencies through the application of academic skills to daily life. A minimum learning continuum with established performance criteria provides guidance to producers of instructional materials and has been used in the revision of primary school syllabi. Project schools exhibited more student interest in activities, revealed a more localized teaching-learning process, and a more pronounced student-teacher interaction. Over a five-year period, there was a clear trend indicating higher attendance and lower dropout rates for both boys and girls, with enrollment increases for girls (Tietjen, 91). The experience of Colombia's Escuela Nueva also shows similar findings, indicating that the qualitative aspects of school curricula are important determinants of persistence and achievement (Tietjen, 91).

36. As pointed out above, classroom curricula, teacher behavior, and school organization often interact as deterrents, keeping girls from learning. Methods used to equalize learning opportunities in schools have included the elimination of gender bias in the curriculum and teacher behavior. However, simply ensuring equal exposure to the same curricular offerings may not ensure equal learning opportunities for girls. At issue is to find a way to structure the learning environment so that girls can learn more effectively. Studies of all-girl schools have demonstrated that in some of these environments,

girls do succeed in academic subjects.

37. Strategies to be implemented inside schools need to reduce dropout and raise achievement. The Government is required under GABLE to reduce repetition rates by 25% in each standard over the next four years (end of program). It has also been recommended that MOEC develop and enforce guidelines for acceptable levels of repetition, and provide pupils and parents with incentives for non-repetition, such as school fee waivers for Standards 2-8. Moreover, minimum and maximum age restrictions could be established and attendance policies be enforced. For instance, to discourage repetition the admission policy to Form 1 has been changed in 1992. 75% of Form I places are now reserved for pupils who have not repeated Standard 8, 20% places for one-time repeaters, and the remaining 5% for multiple repeaters (Williams, 92). However, the real issue is to improve the quality of education so as to reduce failure-based repetition. Classroom teaching practices geared toward promoting learning should be improved so that the number of children who acquire the skills specified in the national curriculum and who successfully complete the primary cycle will be substantially increased.

38. Teachers must be sensitized to gender structuring within the classroom that might deter girls from learning. Policy makers, teachers and parents must become sensitized to the issues affecting girls in academic subjects, such as mathematics and science, and the role adults often unconsciously play in perpetuating the imbalances. All pre-service programs should address the issue of girls' lower performance in core subject areas, as well as gender biases which may negatively affect girls' learning outcomes in school. In-service training for school heads, guidance counsellors and supervisors should sensitize them to gender stereotyping across the curriculum and inside schools. Teacher training and regular instructional support should focus on gender issues inside the classroom, such as negative expectations of girls' performance, lack of attention to girls' class participation, and lack of assistance to pupils' special needs regardless of gender.

39. Textbooks, teachers' guides and other instructional materials should be evaluated and tested, applying a gender perspective. For instance, female role models should be portrayed in science and mathematics. Primary textbooks and teachers' guides should be revised accordingly, with a balanced representation of men and women and appropriate exercises that cater for all pupils' interests. Examination papers should be bias-free in language and content, and they should have high instructional validity. Finally, subjects such as home economics, technical drawing and needlecraft offered according to gender lines should be discontinued and teachers should be trained in topical or integrated approaches to teaching these subjects in primary school. This requires training teachers in "child centered education," with concrete applications across the curriculum. For instance, science and home economics classes should deal with family life education for both boys and girls.

Recommendations for Further Research

40. Curriculum evaluation research should be promoted. It should focus on how relevant current curriculum revisions and classroom practices are to the stated learning objectives of primary education, looking both at the amount and the quality of education provided. To say that "girls in Sub-Saharan Africa receive between one-half and three-quarters of the schooling boys do" is not very informative about girls' learning achievement.

41. Information on actual pupil learning in school is scarce. It is also increasingly recognized that the "production-function approach" to measure learning achievement is limited for the following reasons: Its primary concern is to identify the influence of different factors of school organization on pupil

learning outcomes. In general, the objective is to attempt to identify by means of a multivariable analysis the positive or negative influence that different causes of variation may have on effects of schooling. For the researchers what is useful either from the perspective of understanding the examined mechanisms or from the perspective of educational policy, is to find out what the gains are in terms of learning, moving from a certified teacher to one who has a highschool diploma, or what one loses if pupils are schooled in a class of 30 students rather than a class of 50. Such studies often seek to determine quality inputs to promote learning "as such". In many of these studies the quantitative and qualitative criterion of reference is the increase of achievements within two moments of evaluation: initial and final testing at the beginning and the end of a given school year and grade.

42. This report argues that a different approach is needed, which substitutes for aggregate, summative achievement scores the difference between the stated objectives of schooling and the observed pupil performance. Such an approach to learning assessment would be highly curriculum-based. It would seek to measure the relevance of the means applied to reach defined learning objectives – to learn the content of the primary education program. In this sense it constitutes a diagnostic means of appreciating the relative degree of attainment of expected numeracy and literacy skills. The difference in point of view is important. In one case the indicator consists of pupil performance scores. In the second case, the analysis focuses on the relative quantitative and qualitative degree of mastery of didactic operations and tasks.

43. The methodological perspective is different, too. In the first case one uses selective tests that are useful for adding up grades (summative notation) relative to different activities. In the second case, more diagnostic learning assessment is needed that allows one to compare the relative degree of mastery of the different content areas of the program. This difference in approach explains why "selective" achievement tests are often not closely linked to the curriculum and thus have little curricular relevance. Conventional achievement tests are rarely linked to habitual didactic operations. They require the understanding of a statement and, more often, a deduction from knowledge acquired in school. By contrast curriculum-based learning assessments seek to explore the greatest number of possible facets of a given subject area by means of a set of tasks that are like those already encountered and learned in school.

II. Analysis Of Teacher Training And Some Guidelines ¹⁶

Introduction

In Malawi considerable efforts have been made by the MOEC and MIE to expand education and improve the curriculum. However, they have proceeded without any assessment of what teachers are actually teaching in the classroom and what students are actually learning. Therefore, the effectiveness of past policies and strategies established to improve the quality of education cannot be clearly determined.

Currently, efforts are underway to assess schooling content and the extent to which the intended curriculum is implemented. MIE/Gender Unit/and GTZ evaluation of instructional materials and teacher training efforts will focus on indicators influencing the quality of primary education such as: (a) the adequacy of instructional materials, (b) the quality of the teaching and learning environment for female and male pupils, e.g., teachers' competency and motivation, and (c) the knowledge and skills acquired by pupils through primary schooling.

In principle, teachers teach the curriculum. They decide what gets taught and how. Therefore teacher training should focus on the goals of primary education and expected learning outcomes (in annex of section II) and strategies to best achieve these aims. Gender-appropriate teacher training is sensitive to the content and context of teaching and the ways they affect learning. For instance, teachers learn to become aware of classroom interactions, teacher expectations, or how certain teaching/learning styles might deter boys or girls from learning the intended curriculum.

The following guidelines and training activities can be fully integrated with the current teacher training courses ¹⁷ and be revised and expanded as they are applied. The main gender issues in the basic subject areas are briefly summarized. Teachers, school inspectors and heads should be made aware of these issues during their training. Moreover, the revised criteria for trial testing instructional materials, including teacher interviews and classroom observation presented in section V, also provide useful guidelines for teacher training.

¹⁶ Current primary education objectives are listed in Annex

¹⁷ At present the following teacher training courses are offered: (1) two year pre-service, TTC residential; (2) one year pre-service, TTC residential, practical experience required; (3) MASTEP (Malawi Special Teacher Education Program) 8 weeks residential (modular instruction); (4) in-service training at MIE for heads of primary schools and district inspectors; (5) in-service upgrading at MIE in conjunction with MOEC.

A. Gender Appropriate Teacher Training Activities

GABLE teacher training activities are designed to:

- contribute to the achievement of educational objectives by both boys and girls through participatory research (i.e., teachers observe pupil interaction in specific subjects, as well as pupil and teacher interaction within the classroom);
- encourage gender sensitive approaches in teaching and testing through workshop activities in English, mathematics and science in order to increase pupil achievement;
- help teachers improve their teaching skills through increasing gender-based awareness and discussing effective teaching/learning strategies at seminars that would focus on:
 - (a) the classroom environment (i.e., how pupils process information, affective and motivational factors, gender-based teacher expectations);
 - (b) pupil activities and schemes of work (i.e., individual and group work, methods of working, group interaction and formation, the ways pupils learn best ¹⁸);
 - (c) teaching styles and techniques (i.e., suitable tasks for each pupil, vocational guidance, the use of language or other media that are visual or tactile);
 - (d) classroom organization strategies (i.e., how the teacher organizes the class such as gender-based seating arrangements and class scheduling);
 - (e) learning assessment methods (i.e., diagnostic ¹⁹ and summative evaluation of learning outcomes and pupils' attitudes to the task).

B. Gender Issues in Teaching the Core Curriculum Subjects

Gender and Mathematics

In Malawi both boys and girls have low mathematics achievement scores. Teaching mathematics in a second language poses a big challenge to teachers, because concept acquisition is difficult for many pupils. The teaching syllabus is theoretically designed to facilitate the acquisition of mathematics concepts through the manipulation of concrete materials. It also suggests ways to enhance individual classroom participation through a number of stimulating learning experiences. However, in reality there is a lack

¹⁸ For instance, learning concepts through abstract approaches, or concrete, practical ones such as doing, enactment, experiment, talking, simulation, etc..

¹⁹ That includes cognitive, physiological and affective (motivational) factors.

of instructional materials in schools ²⁰. Learning approaches actually more often stress memorization of facts and information rather than helping pupils first gain an overall understanding of subject matter and relationships. The few documented observations in primary school show little emphasis on exploratory, discovery methods. Mathematics learning is thus less successful for both boys and girls. Moreover, professionals in the education community consider the new primary mathematics curriculum still too crowded and not sufficiently child-centered.

However, throughout their entire schooling, girls tend to under-achieve in mathematics. Many factors discourage girls from doing well in mathematics and science. For instance, the practice of orienting girls to home economics rather than science results in lower mathematical achievement for girls. It also reinforces the stereotype that girls are not good at mathematics and that mathematics is less important for girls to learn than for boys. Combined with low teacher expectations, other factors reinforce girls' alienation from these subjects. A study of girls' primary education in southern Malawi confirms that teachers tend to call upon boys more often than girls to answer questions in mathematics ²¹. Other studies ²² examine the ways that gender-structuring in the classroom affects girls' performance and persistence in Malawian schools. Their findings suggest the need for in-depth studies of classroom interactions in order to design appropriate teacher training programs.

Girls' underachievement in elementary mathematics leads to their underachievement or even their exclusion from studying other subjects, especially science and technological subjects. The amount of previous study of these subjects is an important factor determining students' secondary school achievement in these subjects. Moreover, girls are provided with fewer places at the higher education levels.

Girls' educational aspirations are also affected by the choice of images used in mathematics textbooks. Images of women in mathematics and science topics are conspicuously absent. Both textbooks and teachers' attitudes reflect cultural expectations for girl learners who are generally not expected to do well in mathematics. Girls are shown at home helping with child-rearing and housework, not tasks overtly connected with mathematics. This habit of generally identifying mathematics with male characters in textbooks increases the problem of stimulating girls to become interested in learning mathematics. Primary School Leaving Examinations in mathematics and science reinforce stereotypical images in textbooks. Teachers (and parents) should be made aware of these conflicting messages and help girls learn mathematics in the classroom (and at home) through positive reinforcement and encouragement.

²⁰ The list of newly recommended teaching/learning materials comprises a total of 34 games, objects and utensils, many of which are absent in ordinary primary schools: — exercise books, pencils, bottles, rulers, metric graph paper, sticks, tins, table tops, clock face, wheels, pieces of paper, containers, rectangular solids, cubes of different sizes, balances, coins, calendars, thermometers, strings, measuring tapes, clocks, plates, cloth, fruit, dried beans, tape measures, paper angle cut-outs, money (Kwacha to tambala) etc.

²¹ Davison (1990)

²² I.e., Malewezi (1990)

General teacher training objectives for mathematics should aim at helping teachers to:

- (a) reinforce and maintain a positive attitude of pupils towards mathematics and science;
- (b) relate mathematical concepts to pupils' other subjects and everyday life;
- (c) develop pupils' logical thinking ability and apply it in problem-solving;
- (d) develop pupils' skills in using mathematics to understand their local environment.

Gender and Science

Primary School Leaving Certificate (PSLC) results show that boys outperform girls in science as well, although the gap is not very large. However, the fact that girls are at a disadvantage in science can be observed by the fact that few girls in Malawi opt for elementary science courses. Instead they are often streamed into needlecraft class as of third grade and home economics class as of fifth grade. These are "soft" subjects rather than "hard" sciences. It is unlikely that a girl would be encouraged to opt for science, especially if she does not do well in mathematics. Thus, if girls show no particular interest or ability, they are not encouraged to learn hard core science. This decision is generally made at the school level by the head teacher.

The general studies, science and home economics teaching syllabus clearly indicates that home economics is geared toward girls, although nouns and pronouns in the texts refer "neutrally" to students as youths and pupils. Moreover, the textbooks examined also indicate that the prevalent images explicitly or implicitly discourage girls from studying science. Girls are mainly portrayed in the domestic science context, kitchen, cooking, home management. Work and employment roles mainly pertain to men, whereas women are shown solely in the domestic sphere and family roles. Family life education such as teenage pregnancy is never addressed, however, although it seems to be directly related to girls' withdrawal from school.

There are hardly any images depicting women doing agricultural work, although it is clearly one of their major activities in Malawi. Few agricultural topics are included in science. Women are not depicted as land owners. In the PSLE men are associated with high technology using mechanized and motorized power and women with low technology using human energy. Boys are depicted in the physical science topics and girls in the "home economics" topics. In the teachers' guide there are no specific instructions encouraging the inclusion of girls in the learning of science and agriculture. An urgent strategy is needed to redress this gender imbalance in this important learning area.

Teachers could teach home economics by using a topic approach and by portraying both men and women, boys and girls, in home sharing activities; they could teach science and mathematics by depicting girls involved in "hard" science activities. (See MIE/GTZ guidelines for teaching science in primary schools.) Moreover, consideration should be given to teaching mathematics, science and home economics in a more integrated way by linking concept development among these subjects. This would especially facilitate the transition from 4th grade home economics to 5th grade science. An explicit gender perspective should be pursued while improving (a) the teaching of science and (b) learning achievement in science for both boys and girls in primary schools.

Gender and General and Social Science

The social science objectives aim at societal change and transformation. For social studies (history is taught under social studies in primary schools), there is clearly a need both at the primary and secondary levels for relevant local history texts that portray women in their true roles as leaders and history makers. This would also require a closer look into precolonial Malawian history. Analysis of the new curriculum materials indicates that although textbook content and images seem to be gender sensitive, quite a few messages still convey old stereotypes such as the following examples suggest:

For instance, there are few socio-political and historical images of girls/women in general and social studies pupils' books. Social studies textbooks therefore make it difficult to prepare children for social and attitudinal changes which are part of the primary education goals in Malawi. In addition, the range of work and employment images is much more varied for men than for women. Females are mainly shown engaged in the traditional areas of petty trading. Few women are shown as role models in leadership,²³ entrepreneurship or engaged in nontraditional activities such as banking. One woman, however, is selling petrol. Women are portrayed mainly buying foodstuffs and clothes. There is scant recognition of women's agricultural work, and women mainly appear in the textbook engaged in domestic activities. Women are portrayed as the pivotal force of the family, whereas the men are portrayed mainly outside the family. Male figures are not often portrayed as fathers, whereas women are often depicted as mothers. Given the numerical infrequency of women and girls in these textbooks, girls are thereby deprived of female adult role models with whom they can naturally identify.

Teacher training can assist teachers focus on the above issues by: describing women as an integral part of the nation's workforce, presenting visual impressions of life conditions that reflect the day-to-day reality of Malawi, and depicting women as historical leaders named and shown along with male leaders, particularly by providing images of African women in history, present and past.

Gender and Language

Based on the PSLE, in language (English) girls underachieve as well.²⁴ The language policy of Malawi stipulates that the first four years of schooling be taught in the mother tongue. English is the language of instruction as of grade 5. This limits readability (in English) of mathematics, etc. Schooling is very difficult for pupils after grade 4 when the language of instruction changes from Chichewa to English, and it remains difficult in grade 8. Even orienting teachers in grade 1 is problematic due to language barriers. These instructional constraints merit further research.

In English textbooks, girls are most often described according to their physical features: they cry; their characters are not mentally alert; their socio-political roles are limited and they are not portrayed as decisionmakers. These stereotyped images in the pupils' books are likely to penetrate children's

²³ There are many potential female role models in Malawian society. In the district of Zomba, for instance, there is a large population of female-headed households (close to 40%), and there are four major ethnic groups that practice matrilineality, which has an important influence on the status of women.

²⁴ In part, this may be due to the fact that boys repeat more often than girls in Standard 8 and hence their chances are greater to succeed at the exam.

minds. Teacher training should emphasize concepts of gender equity and actually promote teaching practices that aim at achieving it.

Gender and the Primary School Leaving Examination

The exam both certifies a certain level of learning and also serves as an admission test for secondary school. All six core subjects are tested. The national average pass rate is over 70%. In all but two subjects (religion and Chichewa) girls' pass rates are lower than boys', although the difference is sometimes negligible. In mathematics, for instance, both boys and girls show low pass rates, indicating that mathematics teaching is not very effective and that the test items have low or no instructional relevance.

The images in the Primary School Leaving Exams reinforce the same stereotypes found in pupils' textbooks and teachers' guides (see Section III).

Annex Section IICurrent Primary Education Objectives

The national primary education objectives for student behavior fall under the following five main categories:

1. **Citizenship Skills**

Pupils should develop a spirit of unity, loyalty, obedience and discipline; demonstrate a spirit of leadership; know their rights and duties as citizens; be tolerant and respectful of others; and demonstrate a spirit of cooperation in communal affairs.

2. **Ethical and Socio-cultural Skills**

Pupils should understand Malawi's tradition and customs; develop spiritual and moral values, and understand the effects of beliefs in taboos and superstition on national development.

3. **Economic Development Skills**

Develop a positive attitude towards agriculture; apply appropriate agricultural methods to food, cash crops and animal production; apply knowledge and skills in food preparation and preservation and understand nutritional values; and conserve natural resources.

4. **Occupational Skills**

Pupils should acquire vocational skills in order to raise personal income, improve health and standard of living; develop an ability to design and make crafts; acquire basic knowledge and study skills necessary for personal advancement and the development of society (i.e., communication skills in Chichewa and in English, practical skills related to industrial arts, the application of mathematical skills to everyday life, a scientific approach and attitude to problem solving, and the development of an imaginative and creative mind).

5. **Practical Skills**

Pupils should acquire appropriate techniques for physical exercises, sports and recreation and learn to keep the human body strong and healthy through hygiene, nutrition and sanitary care.

III. Analysis of Gender-Appropriate Malawian Primary Textbooks, Teachers' Guides and Some Guidelines

The following are selected examples of (a) gender-bias in the texts and images and (b) specific areas (i.e., topics, instructional materials, teaching practices) for gender-appropriate curriculum development. The guidelines are based on a preliminary analysis of Standard 1 to 4 textbooks and teachers' guides, as well as teaching syllabi Standard 1 to 8 and primary school examinations (see examples of gender-bias in Annex 5).²⁵

Preliminary Findings

- 1) There are considerably fewer images of females than males;
- 2) some female images are negative in relation to male images and there is social stereotyping of women's aptitudes and potential, as well as their social roles;
- 3) females are either absent or portrayed negatively with regard to work/employment images and sociopolitical images;
- 4) women's family or maternal image is persistent;
- 5) generic nouns are often used for currently male-specific contexts (i.e., the farmer, the scientist, the trader, the teacher) or currently female-specific contexts (i.e., youths and pupils in Home Economics) rather than truly generic situations.²⁶

²⁵ Tools of Analysis: The term **gender** is used as an analytical tool to assess how differences of males and females are revealed within groups of differing ages, ethnic backgrounds and socio-economic levels. The analytical method is based on the following general procedures:

- a) content analysis of the entire book, involving scanning for gender images in both text and pictures (i.e., women's portrayal in family, community and civic life) and links between curricular objectives (i.e., child-centered teaching/learning) and instructional materials and practices;
- b) quantitative analysis pertaining to the gender indicated: characters, names, common nouns, pronouns, activities and roles as well as pictures of males/females and adults/children;
- c) qualitative analysis of the ways adult women and girls are presented (i.e., as individuals or in the family and community context), psychological traits of characters, the socio-political and work-employment perspective (i.e., can children realize from pictures that men and women, boys and girls, can do the same activities), as well as the meanings and messages of the language used.

²⁶ Until the imbalance is improved, the texts should use female-specific nouns and pronouns instead of generic nouns or both genders such as boys and girls.

Guidelines

The Primary School Teaching Syllabus: English Standards 1 - 8

The proposed listening, reading and speaking activities, as well as instructional materials summarized below, present ideal means for gender appropriate curriculum development.

- illustrated short stories, rhymes, songs;
- dialogues, simple conversations and stories;
- simple passages of fiction and historical accounts; picture stories without titles;
- primary mathematics and general studies in teacher's guides, reports from social studies, agriculture and science;
- retelling stories describing people and events;
- reading passages of poems and plays;
- identifying, describing, narrating, reporting and restating main ideas of short stories and historical accounts;
- biographies, dialogues in supplementary readers as stimuli for role play;
- expressing feelings (fear, anger, happiness, desires, preference) and personal thoughts about stories;
- diaries of events, magazines and newspapers;
- pictures, wall newsboards, wallcharts illustrating stories (descriptions and events, school, village, town);
- sentence cards, pictures and sentences in pupils' books;
- role play, dramatization of stories.

Teachers' Guide and Pupils' Textbook - English Standard 3

The following examples are illustrative of where a gender perspective in instructional materials should be ensured:

Use of both female and male characters for:

- telling me a story;
- listening to a story (out of 5 stories only one is about a woman Mrs. Usi, a mother);

- illustrated stories (Mr. Gondwe is a farmer);
- poems and exercises;
- asking pupils what they would like to be (soldier, tailor, teacher, nurse, doctor);
- presenting traditional role models and authority figures (i.e., village headman, religious figure, healer, midwife);
- talking about hobbies, like playing football.

Avoid stereotyped gender-specific messages and images of:

- likes and dislikes, happiness and unhappiness

"Mabvuto likes dogs. He is not afraid of them. But Maria does not like dogs. She is afraid of dogs."

"She is wearing a new dress and shoes. She is happy. She is wearing an old dress. She is unhappy."

- negative or external psychological traits for females alone

"Two fat women met at a market; two clever boys met at a market, two thin women met at a market."

"Maria walked home quickly at half past eleven. She was carrying the basket of maize flour. On the way, Chamba and his friend put a string across the path. Maria did not see it. Suddenly she fell down. The basket fell off her head. The flour fell on wet ground. Chamba and his friend laughed but Maria cried. She went home without the flour."

- family roles and contributions

"Masozi's mother lives in the village. She cooks food for the family. She pounds maize. She uses a pestle and a mortar for pounding the maize. She cuts firewood with an axe. She uses the firewood to make a fire. She puts a pot on the fire. She uses a cooking stick for cooking. She takes flour from a basket. She puts the nsima in plates. The children eat nsima with their hands. They like nsima cooked by their mother."

"Mrs. Phiri, Masozi's aunt, lives in town. She cooks food for her family. She takes her maize to the maize mill to grind it. She uses an electric stove for cooking. She puts a pot on the stove. She uses a cooking stick for cooking. She takes flour from a basket. She puts the nsima on plates. The children eat the nsima with knives and forks. They like the nsima."

English Standard 4

- personal characteristics (even of animals)

"This is Timba. She is blue and white. She is beautiful and happy. This is Leopard. He is black and white. He is beautiful and happy. This is Hyena. He is grey and brown. He is ugly and unhappy."

- social class, family background and equity issues

"How many of you ate something when you were coming to school? What food did you eat? Why did you eat it?"²⁷

Teachers' Guide English 1

- clothing and external appearance

"Tina hasn't got a dress. Her mother wants to buy her one. They go to PTC. They look at five dresses. There is a long one, a short one, a big one, a yellow one and a red one. Tina's mother asks her, "Which one do you like best?" Tina says, "I like the yellow one best." Tina's mother buys the yellow one and they go home. Tina is very happy."

Link curricular content and practices to stated objectives:

Primary School Teaching Syllabus: Mathematics Standards 1 - 8

The main gender issue in the mathematics materials seems to be a lack of "child-centered" and "environment-based" teaching/learning approach. References to daily life and female characters are scarce, and mathematics-learning is not perceived by girls to be pertinent to their lives. This can be a contributing factor to girls' lesser commitment to schooling.

Teachers' Guide for Mathematics Standard 1

Concepts are presented abstractly, few boys and girls are depicted in pictures. The social context of teaching Mathematics is largely ignored.

Pupils' Textbook for Mathematics Standard 1 (Chichewa)

The same can be said about the pupils' book. The first major picture depicts a salesman and a girl buying sweets. Only a final series of small pictures describes scenes of everyday life.

²⁷ This example was deleted during the writers' workshop. There is some evidence that hunger and gender are related and that the former is a constraint to girls' educational attainments.

Teachers' Guide for Mathematics Standard 3

It states that "some of the reasons (why certain mathematical concepts should be taught) are based on the applicability of the concepts to the pupils' daily lives; others may be purely for the sake of broadening academic knowledge." There are hardly any pictures (2) of pupils nor links to their lives.

Pupils' Textbook for Mathematics Standard 3 (Chichewa)

The pupils' book looks the same. No pictures. Mathematics teaching is very abstract and not child-centered. There are less than 10 small drawings depicting daily life scenes.

General Studies: Teachers' Guide for Standard 3

The General Studies learning objectives are gender-sensitive and therefore the instructional materials should reflect these objectives:

- **avoid listing only "male" titles and duties of village leaders such as:** village headmen, ward councillors, teachers, agricultural officers, priests, reverends, and pastors;
- **provide contextual and child-centered gender-sensitive links:** the section on sources and domestic uses of water only states that water is very important to man, animals and plants; sizes of families mainly refers to numbers and economic reasons for smaller families;
- **provide a transition from traditional to contemporary ways of life:** for instance, unit 18 on traditional customs ²⁸ refers to their influence on how people live and relate to each other; such a concern should provide cultural links and support for current curricular content and teaching styles;
- **provide information and guidance in health and family life related issues:** for instance, traditional customs relate to marriage such as paying marriage dowry (lobola/chiongo), traditional dances, songs, and feasts; to funerals such as showing sympathy to the bereaved family, taking part in the chores at the funeral, and giving assistance in the form of food, money and firewood; there is no family life education effort.

²⁸ It is stated that pupils be exposed to traditional customs concerning respect, marriage, and funerals so that they are accepted in their society. By the end of this unit, pupils are expected to (a) state ways of showing respect to leaders, peers, and visitors; (b) demonstrate traditional customs concerning respect; (c) explain the traditional customs practised in the village or township at funerals; (d) explain the traditional customs practised in the village or township concerning marriages. Children should particularly show respect to elders, peers and visitors in order to maintain good relations and portray the good image of a community. Respect should be shown to elders and leaders by being obedient, cooperative and polite, as well as to peers and visitors by being cooperative, tolerant and polite.

Pupils' Textbook for General Studies 3 (Chichewa)

Pictures in this series are much more gender-aware: a woman drawing water from a well, a woman serving petrol in a station, women carrying food on their heads, women washing clothes, boys and girls cleaning the school yard.

Primary Science Teaching Syllabus Standard 5 to 8

Overall, the science materials are not gender-appropriate, although they should already be so, given the topics covered.²⁹ For instance, human pregnancy as such does not figure in the primary teaching syllabus. In general, the science curriculum is very complex and hardly child-centered. There are long lists of subject matter to be memorized. There is little science teaching such as experimental activities. The social aspects of science remain factual rather than personal.

Needle Craft Standard 3 to 8 and Home Economics Standard 5-8

Based on the suggested teaching/learning activities, it is clear that girls are the main target group for needle craft and home economics³⁰, although "pupils and youths" are addressed. Home economics and needlecraft deal with the family, home environment and the family's basic needs. Many of these subjects relate to basic science and could well be taught in a more integrated way with mathematics and science classes. To teach these subjects well, basic teaching and learning materials are essential.

Images in the Primary School Leaving Certificate Examinations

1991 and 1992 Science and Health Education: The only image in the 1991 examination shows a pupil (a boy) doing an activity on light. The tests mainly require recall of facts and information on scientific processes.

1992 Home Economics Theory: Questions pertain to cooking, washing, and child care. The only two female images portray two methods of feeding a child: breastfeeding and with bottled milk.

1991 and 1992 Agriculture: Four different images depict boys and men (as farmers) engaged in agricultural work (1991). Two images depict women utilizing tools of early farmers and civilization in Malawi. Two men are depicted using a modern source of power (a tractor) and planting maize applying fertilizer (1992).

²⁹ Content areas in Standards 5 and 6 comprise food, beliefs, taboos, and AIDS and general health, the environment. Standard 7 and 8 discuss in length AIDS, the life cycle of animals such as insects, pregnant mammals, fertilization of plants, and sexually transmitted diseases such as syphilis. Human growth and development treats fertility and the needs of an unborn baby, human population and child spacing, as well as maternal child health care.

³⁰ It comprises the following topics: the kitchen, food and nutrition, home management and methods of cooking, meal planning, child care, and personal hygiene.

IV. Guidelines For Curriculum Writers' Workshops ³¹

The points made in this section about text content also pertain to illustrations, photographs, diagrams, schemes and drawings in textbooks. Illustrations convey strong messages which can have a much greater impact than the texts on pupils and parents alike. To meet the objectives set for primary education, there are two ways in which textbook writers and illustrators can improve the accuracy of the images which they present: by avoiding bias and by encouraging positive images of all people.

A. Techniques for Improving the Accuracy of Textbook Images of Girls and Women ³²

Care must be taken to ensure that words such as people, youths, man, and pupils (the so-called generics) are indeed neutral, lacking gender-bias, and are positively and clearly all-embracing. In certain instances, supposedly neutral nouns, such as doctor, agricultural officer, etc., are not actually neutral, as they often conjure up a male image in the minds of listeners/readers. For this reason, when there is any doubt at all, a noun of dubious connotation should have its neutrality emphasized by the reinforcing use of a feminine pronoun, reference to a female figure or an accompanying drawing or illustration. Positive examples include: "...in the seventh century traders came from all over the region, the women bringing a and the men b to barter and sell ..." "Doctors do very important work. Dr. Mary Zatheka is a specialist in the hospital ...and Dr. Andrews Chiwalo works in a clinic in ..."

Another technique is to deliberately use gender-indicated generics when referring specifically to males: "Immigrants were offered jobs in exchange for the votes of men." It is just as important to depict female and male figures of various ethnic origins in different occupational roles. For instance, for too long pastoralist community names have been solely associated with cattle-rearing in textbooks, coastal names solely with fishing, etc.. People from all ethnic groups, women and men, must now be illustrated in the less familiar modern technological roles, as well as more familiar traditional roles. They should be portrayed as role models (i) befitting a modern technological nation (ii) which also has a rich diverse cultural-historical tradition. Role models represent (can come from) the past, the present and the future. It is not easy to provide an appropriate mix of historical heroes (for both women and men), contemporary figures and imaginary future figures, in order to promote non-stereotyped attitudes consistent with the goals of education to school children.

To avoid using biased language, the following steps can be taken:

- (a) Use of collective nouns that definitely refer to both males and females: "The class can make a simple map of the region."
- (b) Use of relative pronouns: The teacher should organize "the time" rather than "his time" so that...
- (c) Use of imperatives: "Take the class outdoors and observe the direction of sunrise and sunset."

³¹ In time these guidelines will be reviewed.

³² Adapted from Changing Images by A. P. Obura (1991).

- (d) Use of impersonal verbs: "It is easy to make a traditional musical instrument with ..."
- (e) Use of passive verbs: "A torch and a light bulb can be used to show how sunlight heats the land and the oceans as the earth rotates." "At least two periods will be needed for discussing, planning ..."

Avoidance tactics alone are not enough, however. Cultural conditioning makes it difficult for the young female reader to progress from a male world order image to a more balanced one without additional help.

B. Positive Steps to Take

Positive steps can be taken to increase positive female images while still increasing positive male images, too, thus producing a more balanced perspective.

- (a) Additional references to girls and particularly to women, paying particular attention to the appearance in the textbook, the order of presentation, the centrality of the character in the context, etc..
 - (i) More named female characters, with diverse and complex, multi-dimensional personalities.
 - (ii) More use of feminine words: business women, headmistress, etc. and fewer so-called generics.
 - (iii) More use of feminine pronouns; she, her, hers referring to a preceding noun ('a scientist should ... she can remove the outer shell and dissect..')
 - (iv) Care in the presentation of relationships between characters, equalizing the role of dependency and authority between them.
- (b) Additional positive references to girls and women, specifically including a rehabilitation of images of women in the economic, cultural and political life of the family, the community and the nation.
- (c) A deliberate and specific increase of positive female role models: active and pro-active women; women in a wide-ranging variety of occupations, particularly women in science and technology in modern world settings; in prestigious and well-remunerated jobs; fully recognized in an economic and social sense in the agricultural sphere; in leadership roles; in roles of social responsibility; depicting a full range of psychological attributes; removing emphasis on the external, physical appearance of females.
- (d) At times, in order to redress the historical image imbalance in Malawi textbooks and school curricula, there will have to be an extra inclusion of female-related images:
 - (i) to make all readers aware that girls must learn every subject as thoroughly as boys in school;
 - (ii) to build up habits of interpreting 'female and male' when words like 'people in the past', 'farmers', 'bank officials', 'members of parliament', 'scientists', 'veterinary doctors', 'workers' are used, etc..

- (e) Male figures to be depicted more frequently in the home, sharing home activities.
- (f) Male figures to be depicted more frequently in a family-related and child-related capacity.
- (g) Male figures to be depicted more frequently as full human beings: caring and feeling.

C. MIE Style Manual ³³

Gender

1. It is now widely recognised that much of the English language is male-biased, having evolved during times when society was dominated by men. In order to make quite clear to all readers - teachers and pupils - that girls and women should be valued just as highly in Malawian society as boys and men, sentences in the Institute's materials need to be constructed to give equal recognition to males and females.

This involves adjusting:

vocabulary which refers only to men ('manpower', 'chairman', etc.) when women/girls as well as men/boys are being referred to;

male pronouns ('he', 'him', etc.) whom women/girls as well as men/boys are being referred to;

vocabulary invariably used only about women/girls ('gossip', 'flaunt', etc.) which is intended to demean and trivialise them.

2. **Vocabulary which refers only to men**

It has been argued that vocabulary like 'manpower' includes women. However, this is clearly not a tenable argument: women are not part of men; they exist in their own right. It is perfectly possible to find gender-neutral vocabulary to replace such words - 'staff' instead of 'manpower', 'chairperson' instead of 'chairman', 'people' or 'humankind' instead of 'mankind', and so on.

3. **Male pronouns**

It has been argued that English lacks a singular pronoun which includes male and female, and that as it is too clumsy to use both 'he' and 'she' on every occasion, one should continue to use 'he' when we mean 'he and/or she' and 'him' when we mean 'him and/or her'. This contributes to making half of the human race invisible. Although initially many authors may not always have found it easy to construct appropriate sentences, they have learned to adjust their writing style to use she/he, he/she, him/her, her/him without sentences becoming clumsy. Sometimes 'she' or 'he', etc., is preferable, depending on the flow of the sentence.

³³ As it currently stands (1992).

4. Vocabulary which is commonly used to demean women

There are a number of words commonly used by men to describe women's behaviour and actions, which tend to demean or trivialise them. For example: it is rare to hear a man describe another man as 'gossiping'; yet it is common for a man to use 'gossip' when speaking about a woman. In doing so, he implies that her talk is trivial and unimportant, and by not using the word 'gossip' about men, he also implies that men's talk is always about important matters. A range of words that fall into this category - 'flaunt, hysterical, wheedle' and so on – need to be avoided in all educational materials.

D. MIE Guidelines For Refining Instructional Materials

Gender Appropriate

Are the materials gender appropriate? Do they provide equal opportunities to all learners (boys and girls)?

V. Criteria To Be Integrated With MIE Evaluation Manuals

A. Rationale for Evaluating MIE Instructional Materials from a Gender Perspective³⁴

Research on the impact of curricular changes on learning outcomes is scarce, but there is no question that the two are linked. It is generally recognized in the literature that gender-based stereotypes and expectations in instructional materials and practices shape pupils' educational achievements. Textbooks contribute to the socialization of pupils, by shaping attitudes as well as teaching content. They are image-forming and sources of information on social norms, often the sole source of any outside information. Textbooks present models of people, behavior and thought patterns. By implying that some models are good or bad to imitate, they thus have an intellectual, cognitive and affective influence. They present a common culture and a set of values or norms, suggesting to pupils what is worth learning. While textbooks are sources of information, they are often a scarce resource in many schools.

B. Gender Appropriate Curriculum Development

A gender-aware approach to curriculum goals such as "fostering respect for each other" would prepare both boys and girls for those changes in attitudes and relationships by presenting them in positive interactions and by avoiding negative images of girls as, for example, less mentally alert than boys. "To inculcate a spirit of leadership in pupils" women should also be shown in leadership, work and employment roles rather than depicted solely as mothers and housewives, as was found in most available textbooks (see examples in guidelines for textbook writers).

Gender-aware educational development, sensitive to the teaching and learning context, seeks to gain insight into how teaching and learning are experienced by pupils in primary schools in Malawi. It expresses a concern for equitable access to education and adequate levels of educational achievement for both boys and girls.

Gender analysis of instructional materials explores whether curriculum content meets the objectives set for primary education. It examines how the messages about girls' and women's roles in society are conveyed to girls and boys through teaching content and practices. It explores social stereotyping of personality traits of men and women, their aptitudes, family roles and contributions, as well as social roles and participation in society. It also analyzes views that negate or deny the complexity and diversity of human nature and attitudes to see if such views demonstrate the ineptitude of women for the world of work and leadership, deprive men and women of their capacity to feel and experience, and always portray women in subordinate positions to men.

³⁴ The Instructional Materials Evaluation and Implementation Schedule (p.8) has been revised in terms of time frame, number of books, supplementary materials, and gender perspective.

C. Tools and Methods of Analysis

The term **gender** is used as an analytical tool to assess differences among and within groups of people, i.e., male and female groups, age groups, ethnic groups and socio-economic groups.

The following criteria should be applied when trial testing instructional materials through the use of:³⁵

- a) expert judgement
- b) classroom observations
- c) teacher interviews

For each pupil's book and teacher's guide, the most useful and appropriate analytical method should be devised by the expert. However, it would be based on the following general procedures:

- a) content analysis of the entire book, involving scanning for gender images in both text and pictures (i.e., women's portrayal in family, community and civic life);
- b) quantitative analysis pertaining to gender indicated: characters, names, common nouns, pronouns, activities and roles as well as pictures of males/females and adults/children;
- c) qualitative analysis regarding the method of presenting adult women and girls (i.e., as individuals or in the family and community context), psychological traits of characters, the socio-political and work-employment perspective (i.e., can children realize from any pictures that men and women, boys and girls, can do the same activities), and the meanings and messages of the language used.

Teacher interviews and classroom observations should explore links between curricular objectives (i.e., child-centered teaching/learning), instructional materials and classroom practices.

The main question would be: Is there any gender structuring in the classroom in terms of

- teaching/learning strategies/styles
- classroom organization
- teacher attitude towards pupils
- teacher expectations of pupils

³⁵ The data collection instruments have been reviewed and adjusted accordingly. Specific subject areas such as Mathematics, English and Chichewa should be more closely examined as well as general studies and science, because they all have either direct or indirect gender-implications. This analysis should be informed by relevant theory, practice and research in all these subject areas.

D. Criteria for Trial Testing Instructional Materials³⁶

Several criteria are used to support trial-testing of instructional materials. These include teacher interviews and classroom observation. These criteria may also serve as reference for the data analysis. The following questions serve as an evaluation checklist:

1. Are the materials properly related to the syllabus?
2. Does the Teacher's Guide correspond to the Pupil's Book?
3. Do the materials have specific problems regarding:

3.1 Time

- Is the time allocation in the lesson/Teacher's Guide appropriate?
- Does the number of lessons correspond to the period allocation?
- Does scheduling permit girls (boys) to attend science (needlecraft) class?

3.2 Objectives

- Are the learning objectives achievable?
- Are higher level learning objectives included?
- Are they operational (practical, applicable)?

3.3 Content

- Is the content appropriate for the (age) level?
- Is the content gender appropriate (not gender biased)?
- Is the prerequisite knowledge appropriate? Is it adequate?
- Is the background information appropriate? Is it adequate?

3.4 Teaching/learning Aids

- Are the teaching/learning aids appropriate?
- Are they readily available?
- Can they be obtained locally?

³⁶ Adapted and expanded from the MIE/GTZ Manual for Evaluating MIE Instructional Materials.

- Can they be prepared by the teacher following the instructions of the guide?

3.5 Illustrations

- Are the illustrations/diagrams clear?
- Are they gender-biased?
- Are they properly related to the text?
- Do they communicate the intended messages?

3.6 Presentation of Text

- Is the text presented appropriately, i.e., legibility and layout?

3.7 Language

- Is the language appropriate for teachers/pupils?
- Are new or difficult words explained in the text?
- Is the language correct (grammar, spelling)?
- Is the use of language gender-biased?

3.8 Pupil Activities

- Are the suggested activities appropriate? Are they adequate?
- Is it technically possible to implement them?
- Do they cover the desired objectives?
- Do they provide opportunities for direct involvement of pupils, boys and girls?
- Are they organized along gender lines?
- Do they provide opportunities for higher level learning experiences?
- Are the objectives which are not covered by the teachers' guides likely to be addressed through the activities?

4. How do environmental factors influence the use of the books by pupils?

- Availability of reference materials
- Class size

- Seating arrangements
- Physical facilities

5. How do teachers' background factors influence the use of the books (experience and motivation)?

E. Teacher Interview

1. Background Information

The evaluator requires adequate preparation before the interview takes place. The evaluator should be familiar with the type of questions to be asked during the interview. He/she should also be knowledgeable about how the responses will be recorded on the standardized schedule.

The interview schedule contains a set of areas of interest which have been deemed important in the evaluation of the instructional materials. Although the items appear as questions in the actual schedule, the evaluator should use them as thought-provoking items in each area. The evaluator should use his/her skills to ask follow-up questions for each item. The responses should not just be yes/no.

Taking two examples of the interview guidelines, e.g., problems of content and teaching/learning aids, the guiding question may read: What problems do you face in your teaching as regards to:

1.1 Content

Most teachers would answer: no problem. The evaluator should be able to ask follow-up questions, e.g.:

- Are there any technical terms which are difficult to explain? If any, which one?
- What is your view of the amount of content contained in the unit?
- Are there sufficient review exercises to help children learn the new vocabulary and concepts?
- Are there sufficient exercises to develop facility in oral or written communication?
- Are the cognitive curriculum objectives and the standards of performance expected of pupils difficult to attain in light of the instructional resources, current teacher training, and the use of language?
- Is there a correspondance between curriculum objectives and instructional materials?
- Does the content reflect the reality of everyday life?
- Is the content gender biased?

1.2 Teaching/Learning Aids

There are two areas mentioned in the guidelines: Availability and suitability. Availability may not perhaps cause any problems. The teaching/learning aids are either available or not. The teacher should be encouraged to make them locally.

On the question of suitability of illustrations and exercises, the following issues could be considered:

- Are teaching practices limited to "chalk and talk" methods?
- Is there clarity about the level of learning expected from the exercises?
- Are the teaching/learning materials adequate, e.g.: size of the illustration, relationship with the text, the point where it appears in the text, and the way it is labelled?

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ANNEX 1

UPDATED WORK PLAN FOR GABLE LECTURER AT MIE (21 October, 1992)

July 1, 1992 - March 31, 1993

- 1.1 Conducted 4 orientation seminars for teacher training college staff on gender appropriate curriculum implementation (July, 92 to March, 93);
- 1.2 technical assistance during September 20 to October 21, 1992; next technical assistance planned for 6 weeks during March-April, 1993;
- 1.3 started contributing to writing Standard 4 instructional materials (by 10/31/1992);
- 1.4 concluded contribution to revising Standard 2 instructional materials (by 12/31/1992);
- 1.5 concluded contribution to writing Standard 3 instructional materials (by 12/31/1992);
- 1.6 assisted in trialling Standard 3 material (by 12/31/1992);
- 1.7 participated in orientation of TTC college tutors at MIE (12/31/1992);
- 1.8 reviewed educational policies (i.e., circulars) at MOEC and produced report (12/31/1992);
- 1.9 conducted a study tour to Nairobi, Kenya (to Kenya Institute of Education, Rockefeller Foundation, Universities etc.) and produced a detailed trip report (12/31/1992);
- 1.10 contributed to the revision of the GTZ/MIE instructional material evaluation manual and implementation schedule (12/31/1992);
- 1.11 took a training course in word processing (12/31/1992);
- 1.12 planned and conducted a workshop for MIE professional officers on integratin existing supplementary instructional materials pertaining to FLE (Family Life Education) into ongoing curriculum revision and teacher orientation by 12/31/1992); produced workshop report (by 1/31/1993);
- 1.13 completed and began implementing guidelines for writers and teachers workshops at MIE (2/28/1993);
- 1.14 prepared detailed work plan for second GABLE program year (3/31/1993);
- 1.15 explored proposed research project (scope and funding) and prepared research proposal for funding with technical assistance (3/31, 1993);
- 1.16 contributed to revision of Standard 3 instructional material (4/30/1993);
- 1.17 continued contributing to writing Standard 4 instructional materials (4/30/1993).

GENDER APPROPRIATE CURRICULUM DEVELOPMENT AND DESIGN

Objectives

The goal of gender appropriate curriculum development and design is to improve the conditions and outcomes of primary education for both boys and girls. It involves promoting information and comprehension of the issues surrounding teaching and learning in primary schools by focusing on the content of schooling from a gender perspective, exploring whether: textbooks are biased or not, girls have access to science education, girls are getting as much of the teacher's attention as boys, policies hinder girls' access to schooling, examination questions are gender biased or have instructional validity.

Specific objectives of the GABLE work program include:

1. Review all Standards 3 to 7 curricula
 - a) Mathematics, English and Chichewa
 - b) General Studies (3 to 4)
 - c) Agriculture, Science, Health and Social Studies (5-7)
 - 1.a Consult with the education community about gender issues
 - 1.b Orient and train subject panels (9 for Standards 3 to 4 and 12 for Standards 5 to 7)
 - 1.c Review instructional materials drafted by MIE subject panel members
 - 1.d Advise MIE professional staff on the integration of new material
 - 1.e Conduct curriculum development workshops for textbook writers
 - 1.f Conduct orientation courses for teachers and other inservice training activities (INSET) such as one-day seminars for practicing teachers, and school counseling and special projects in mathematics and science for girls
2. Review supplementary materials for the newly revised curricula in collaboration with MIE professionals and contracted experts -- such as
 - a) Teachers' guides
 - b) Pupils' books
 - c) Teaching aids

3. Review existing supplementary instructional materials (i.e., Family Life Education materials) for possible inclusion into the primary teacher training curriculum in collaboration with MIE professionals and contracted experts.

4. Assist senior MOEC/MIE officials in developing gender aware policies and programs

5. Participate in potential research project on curriculum implementation/evaluation and promote other research related activities such as:

- organizing a forum to bring (women) education researchers together, (i.e., researchers from the Board of Examination, Chancellor College and MIE) to strengthen and expand research on gender issues, to create a forum for mutual support and the exchange of ideas, and to establish links between local and foreign institutions and similar programs;

- collecting statistical data (i.e., regular updating of gender disaggregated statistics);

- collecting descriptive research, ethnographic studies (i.e., implementation of revised curriculum at the classroom level, social/historical research on gender issues in the wider community).

ANNEX 2

Statement of Work

Consultant for GENDER UNIT AT MALAWI INSTITUTE OF EDUCATION (MIE)

Background

The Girls' Attainment in Basic Education and Literacy (GABLE) program's objective is to increase girls' attainment (defined as access, persistence and completion) in primary Education. Achievement of this objective is constrained by a number of factors, including widely held attitudes which place a low value on the education of girls, and the poor quality of primary education. The most difficult constraint is the limited cultural expectations of Malawian society towards girls' capabilities and benefits resulting from their education. The majority of parents and teachers generally regard girls as less able than boys. Despite improvements in content and approach in the recently revised primary school syllabi, ongoing instructional materials development remains insufficiently geared to the interests and learning needs of pupils, especially girls. For this reason, GABLE program conditions include a requirement that the Government of Malawi (GOM), through the Ministry of Education and Culture (MOEC), adopt a plan and budgeting mechanism for developing a gender-appropriate curriculum for use in primary schools, teachers' colleges, and in-service teacher training through the establishment of a Gender Unit at MIE.

Objectives

The objective of this contract is to provide technical assistance to help design and implement a work plan for the Gender Unit that will complement and cooperate with the curriculum development staff currently developing and trial testing primary education instructional materials, such as pupils' books and teachers' guides.

Tasks and Responsibilities

1. Assist the Gender Unit at MIE to design and implement a work plan for developing a gender appropriate curriculum for use in primary schools, teacher training colleges (TTCs), and in-service teacher training.
2. Identify requirements for staff, office facilities, supplies and materials, and additional technical assistance to implement the program planned for gender appropriate curriculum reform.
3. Assist the Gender Unit in setting and meeting implementation targets for each year of the program.
4. Conduct in-service training courses for teachers to change their attitudes so that they are sensitized to gender issues in classroom in primary schools.
5. Design a training program and guidelines for TTCs to build skills and capacity of teachers to address gender issues in primary schools.

Deliverables

- 1. Training papers and guidelines for incorporating and integrating gender considerations in the design of curricula and teacher training methods.**
- 2. Incorporation of gender equity issues in new curricula.**
- 3. Report on policy and institutional constraints to female participation and persistence in primary schools, including (a) list of factors identified as having a differential impact on female participation in schools and (b) recommendations for changes required in primary schools to increase girls' persistence and achievement.**

ANNEX 3MALAWI: GABLE PROGRAM / TECHNICAL ASSISTANCE TO MIE GENDER UNITTrip Report: 21 September to 22 October, 1992Orientation of Standard 1-3 Teachers at MIE (21 to 25 September, 92)

The GABLE lecturer ¹ made an introductory presentation on gender issues in primary education, focusing on the need to develop gender appropriate curricula and associated teacher training as well as classroom teaching.

During the various sessions, MIE staff encouraged teachers and school heads to get both boys and girls involved in needlecraft and home economics. ² Judging from the reaction of participants, intensive and extensive in-service teacher training will clearly be required to implement the revised curriculum objectives, particularly for teaching mathematics, science and home economics. These three areas could be taught in a more integrated way to facilitate the transition from 4th grade home economics to 5th grade science. Since it is too late to reconceptualize the teaching syllabi, the development and availability of instructional materials is crucial in order to reach curriculum goals. Although teachers are encouraged to use locally available materials, basic tools such as pencils, rulers and thermometers are still needed, in addition to the new textbooks. A preliminary review of revised instructional materials is presented in the guidelines for writers' workshops.

The following (teacher) training courses are currently offered:

- 1) 2 year pre-service, TTC residential, T3 or T2 O'Level qualifications
- 2) 1 year pre-service, TTC residential, practical experience required
- 3) MASTEP (Malawi Special Teacher Education Program) 8 weeks residential (modular instruction)
- 4) In-service training at MIE for Heads of Primary Schools and District Inspectors
- 5) In-service upgrading at MIE in conjunction with MOEC
- 6) Curriculum development workshops for writers

¹ Dora Mwalwenje

² Examples can be used from other African cultures where men do needlework and other crafts. For instance, in Niger, men embroider hats worn by men, they decorate gourds used for food, etc..

GTZ Primary Science Project Workshop (21 - 25 September, 92)³

We participated during two days in the "ZOPP"⁴ (Target Oriented Project Planning) seminar and managed to add a gender perspective to the overall primary science project goal as follows: Improve the teaching of science and learning achievement in science for both boys and girls in primary schools.

The seminar stressed the need to match the new science curriculum with the proposed science kit, following the revised implementation schedule:

Revised curriculum implementation schedule:

1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Std.1	Std.2	Std.3 +4	Std.5 +6	Std.7	Std.8
Original plan:		1996/97	1997/98	1998/99	1999/00
		Std.5	Std.6	Std.7	Std.8

First project phase: 2/1992 - 9/1994

The purpose of project phase I is to work out with MOEC a viable implementation strategy of the science program to schools countrywide. A strategy paper will outline target groups, timing, quantities, costs, distribution, maintenance, and alternative strategies. Target groups comprise: (1) Primary School Heads as coordinators, (2) primary school teachers for Standard 5 to 8, (3) teachers initially trained as science teachers, (4) primary school pupils, (5) teacher training science tutors, (6) TTC trainees, (7) in-service trainers, inspectors and heads.

To achieve the overall goal, improved information, orientation and communication among the various groups is needed. Instructional leadership in science is vital as well as teachers open to new approaches and ideas in science education. Gender-aware instructional and material support would involve sensitizing teachers to the special needs of girls and designing textbooks in such a way that science learning becomes a real possibility for both boys and girls.

Once an updated plan of operation for the Primary Science Project is available, gender evaluation and editing should be incorporated. For instance, for the production of the teacher's guide expert judgement is needed. Formative evaluation, including classroom observations, might focus on pedagogical issues such as child-centered and problem-oriented learning, gender-awareness in the context

³ Selected participants: J.E. Siege (GTZ), W. E. Chauluka (MIE), G. Hiddleston (GTZ), P. Whittle (Chancellor College), A. Kenyon (U.C.T., Cape Town), H. Hartmann (GTZ), M. Chimango (MIE), M. Gonthe (MIE), M. Makulumiza (MIE), Dr. S.B.D. Safuli (MIE), Ms. Mlagha (Chancellor College), Ms. Chikoko (MCDE), V.S. Chamdimba (MOEC), Mr. Werekhwe (MANEB).

⁴ Zielorientierte Projektplanung.

of teaching and counseling. There has to be a particular focus on the context of teaching/learning, classroom interaction and organization.

The number of female teachers in science should be significantly increased, especially in order to provide more role models in science for girls.

Visit to Malawi Examination Board, Zomba (28 Sept. 92)⁵

The Primary School Leaving Certificate examination (PSLC) certifies a certain level of learning and also serves as an admission test for secondary school. Admission to secondary school is regulated first by available spaces and district quotas, then it is based on merit. Cut-off rates are high, although somewhat lower for girls. The admission rate to secondary schools is about 8% or even lower.

All six core subjects are tested. The national average pass rate is over 70%. In all but two subjects (religion and Chichewa) girls' pass rates are lower than boys', although the difference may be negligible. In mathematics, for instance, both boys and girls show low pass rates, indicating that mathematics teaching is not effective and that the test items have low or no instructional validity.

Girls also underachieve in science. Most girls are streamed into home economics in lieu of science as of fifth grade and they are not encouraged to learn hard core science, if they show no particular interest or ability. This decision is generally made at the school level by the head teacher. Needlecraft is introduced in third grade.

Subject officers sit on the Examination Board to contribute to the development of test items. There is also a seven member research team working on test development such as item validity and reliability: It is very likely that gender differences in pupil achievement are only part of the problem. Low curricular and instructional validity of the PSLC, as well as language difficulties seem to contribute to ineffective testing and overall low test results.

Teaching and testing practices tend to be closely linked. For instance, readability (in English) of mathematics is very difficult after grade 4 when the language of instruction changes from Chichewa to English, and remains still difficult in grade 8. Even orienting teachers in grade 1 is problematic due to language barriers. These instructional constraints merit further research and financial support in the context of curriculum implementation and associated examination reform. GABLE should involve one or two of these researchers in its own program.

Visit to Chancellor College (29 Sept. 92)⁶

English, mathematics and science teacher education are priority areas for pre-service and in-service secondary teacher training because of severe teacher shortages in these subjects. It is estimated

⁵ Persons met: Mr. Mlagha (Deputy Executive), Mr. Chikoti (Computer Specialist), Mr. Yadidi (Examination Specialist), Ms. Esme Kadzamilu (Measurement Specialist).

⁶ Persons met: P. Whittle (Associate Professor of Science Education and Head of Curriculum and Teaching Studies Department), Dr. Pat Hiddleston (Professor of Mathematics Education), Ms. Violet Bonga (Lecturer on History Education).

that more than 550 secondary teachers are needed, over 150 of whom for mathematics. The College offers a D.Ed program in Humanities and Science. The Department of Curriculum and Teaching Studies was set up in 1988 and currently is split into two sections: a) Language and Social Education, b) Mathematics and Science Education. The latter staff work closely with their counterparts in the Malawi Mathematics and Science Teaching Improvement Project (MAMSTIP). The College has an overall enrollment of about 1,400 students, less than one third of whom are women.

Overall, there are few women among the College faculty. In Chemistry all instructors are male. The female hard core science students do not go into teaching. Out of 10 teacher graduates in 1991 there was one woman. Of the 379 first year students in 1991, 88 were female. 72% of the female students come from girls-only schools, as girls in single-sex schools perform better on the mathematics and science exams, crucial for admission to college. However, average grade statistics for Chancellor College students, both male and female, show a decline in overall achievement over the past few years, with female student scores the lowest.

A major policy issue is the high drop-out rate of female students. Once pregnant, they are not allowed to continue their studies even when married. About 15% may drop out of a particular cohort.

To meet the need for secondary school teachers, the enrollment rate for secondary teacher training is to be increased from the current 35% to 50%. As of 1993, there will also be a two-year emergency teacher education program at the Domasi TTC, whose current program will be transferred elsewhere. It will train about 240 teachers annually. Chancellor College trains lecturers for this new program. Among several issues, one is the recruitment of the best primary school teachers and training them as secondary school teachers.

The College has been involved in primary education curriculum development at the writers' workshop level, especially to facilitate the transition to secondary education. To become a member of the writing panel is not easy, but should be encouraged for more college faculty (i.e., in mathematics and science), since this function is crucial for the improvement of textbooks and teachers' guides.

The new primary mathematics curriculum is still considered too crowded and not child-centered enough. For social studies (history is taught under social studies in primary schools), there is clearly a need both at the primary and secondary levels for relevant local history texts that portray women in their true roles as leaders and history makers. This would also require a closer look into precolonial Malawian history.⁷

Visit to Makata Primary School in Blantyre (30 Sept. 92)

This urban primary school is unique in that it incorporates all the weaknesses of the system. Over 3,000 pupils, double shift in 16 classrooms and several more shelterless ones under a tree, no benches, no tables, a student teacher ratio well over 100. Most grades are streamed into 3 or 4 classes. Adequate teaching/learning conditions are inexistent. In the early grades enrollment is about equal for girls and boys. Girls begin to drop out in later grades and their achievement equally declines. School size and fees do not seem to be the only problem. Girls' attitudes towards school and lack of motivation

⁷ The standard text for secondary history education is the 1968 version of History of Central Africa by P.E.N. Tindall.

are said to be other critical factors leading to underachievement.

It is a miracle that anyone can learn anything under these classroom conditions. The new textbooks just arrived. The teachers' guides are still missing. Teaching and learning aids are literally absent in the classrooms.

Visit to the Teacher Training College in Blantyre (2 Oct. 92)

We conducted a workshop for the teacher trainers in the TTC library. After explaining the GABLE program to a group of about 15 teacher trainers (five women), a discussion on gender factors in primary education slowly started. It ended an hour or so later in a lively exchange of views. It seems likely that policies (written or not), such as separate seating arrangements in class for boys and girls, will remain because of cultural norms. Pregnancy is considered a clearcut reason for a female student to have to drop out of school, at the primary, secondary or higher education levels. No argument was made in favor or against this policy.

Gender-bias in textbooks and teachers' guides had not been thought about, but trainers felt that the older curriculum materials were of very poor quality in any event. Girls' lower achievement in core subjects was considered as much an attitudinal as a cultural problem. In general, it appears that most trainers and teachers have to be made aware of gender structuring in their own work and in the classroom, especially in the way they teach and expect different learning outcomes for boys and girls.

Review of GABLE Program and Budget for 1992/93 (1-2 Oct. 92)

* Two meetings were held at MIE and PIU in Blantyre. The budget had to be increased for several items (construction of office block and house, vehicle, and office equipment). It was agreed that MIE would receive an advance for those expenditures directly disbursed by MIE, such as internal training and supervision. Training in word processing for the GABLE lecturer was added, and it was made clear that other resources may be needed (i.e., for research to support successful implementation of GABLE) as the program is being reviewed. The house for the lecturer will not be ready in time and additional funds for renting a house are required up to the spring of 1993.

Visit to Pirimiti Girls' Primary School (7 Oct. 92)

We were unannounced. Teaching was going on in most classes. Pirimiti is an all catholic primary school, with 6th to 8th grade boarding facilities for about 150 girls. Total enrollment is 800. The early grades have well over 100 students, but there is only one classroom per grade. Pupils sit on the ground. In grades 6 to 8 there are a few tables and chairs. Each class has a wide range of younger and older girls.

All classrooms looked devoid of teaching materials other than blackboards. The outdoor environment looked clean, a school yard filled with trees and flowers, although the buildings themselves were somewhat delapidated.

In the lower grades there were hardly any textbooks or writing materials. Classroom activity involved repeating, recalling and answering questions. A science class went outside to pick flowers and then come back to learn the vocabulary and concepts associated with flowers.

The school is considered a good one, because teachers actually teach. Almost 80% of the pupils pass the Primary School Leaving Certificate, yet only 5 girls were selected for secondary school last year.

Our discussion with the head teacher (a Catholic nun) revealed that the new teaching syllabi and textbooks had not yet arrived. They were apparently at the DEO's office. Transport is a major problem. The materials had been promised during the teacher orientation meetings. They had heard about GABLE paying school fees for girls. Did not know the details, had not read anything officially. Communication is a problem.

We wondered about the socialization of Malawian girls/women. The most striking images have to do with girls' shy behavior. Their demeanor was always reticent. They showed no signs of outward confidence when responding to the teacher. Sixth grade girls were lining up, kneeling in front of their teacher (a woman) to show their homework. Each time an individual girl gave an answer, she had to stand up. All girls knelt down or bowed in front of adults, especially men, when coming or going.

To our question about girls' attitudes towards learning and schooling in general, the school head told us that boys learn more easily than girls. Girls become more complicated as they mature, and they change their learning behavior more often than boys do. The other constraint to girls' achievement is culture, which takes time to change. Teachers obviously have a crucial role to play in mediating this cultural change both through curriculum implementation and their own behavior in the classroom.

Visit to Chimkwezule Primary School ⁸

This rural school is located in the foothills of the Zomba mountains, surrounded by fertile farmland during the rainy season. We were unannounced. All pupils were in the courtyard doing "manual work:" sweeping, thatching the roof of a temporary classroom, and just hanging around. The headteacher welcomed us. This year's enrollment is higher than last year's at this time and there are more girls. At least in the early grades there are as many girls as boys. Girls drop out for various reasons, parental attitudes being the most important one. According to the headmaster, parents do not always encourage girls to go to school, especially when they reach marital and childbearing age. Learning expectations for girls are not high, although some girls do well in school. It is believed that the waiver of school fees for girls has already increased this year's enrollment. School fees range from Kwacha 1.50 to 3.50, grades 1 to 3 and 4 to 8 respectively.

Last year three students (all boys) were selected for secondary school. They had repeated 8 th grade and passed the PSLC three times. There is no limit to repetition, although girls tend not to repeat as much at this level. Each year many girls get pregnant, either by another pupil or a village man. In some schools it may be a teacher. If caught, the girl and boy are expelled from the school. Some girls have gotten pregnant in grade 3. Initiation rites as well as declining social morals are said to be responsible for early pregnancies. In such a case, the school and church might talk to the parents, but it is usually too late and the reprimand rejected for cultural and spiritual reasons. Family life education is not considered appropriate. As to the separate seating arrangements in class, schools did receive a circular from the MOEC advocating this regulation.

⁸ Off Lilongwe road - Machinga District

We visited empty classrooms, without furniture except for 7th and 8th grades, delapidated walls and floors, filled with dirt. Two new buildings made from red brick comprise two large classrooms. It is dark inside due to the lack of light coming through the honeycomb windows made of concrete. These buildings are IDA financed. Overall, there are 1,074 pupils and the student teacher ratio is well over 100.⁹ The figures listed below do not include repeaters in each class.

Visit to the DEO's Office - Zomba Rural

We had a discussion about girls' education with 4 female District Inspectors. They tend to agree that school fees, pregnancy and socio-cultural background of the girls mainly contribute to their withdrawal from school or never going to school. The pregnancy issue is a big one, but the related policy is considered to have a preventive rather than an educational purpose. However, the policy does not seem to work. Opinions are divided over readmitting young mothers to school. Some favor distance education instead.

Family life education in primary school seems feasible through the home economics and science curricula in the form of health information and counseling about AIDS and sexually transmitted diseases. The seating according to gender is considered a contributing factor to pregnancy and truancy, since girls and boys do not learn to get along with each other naturally.

A major problem in the schools seems to be lack of instructional materials to properly implement the curriculum. This is especially so in needlecraft, home economics and science. Another problem is the behavior of teachers themselves, their lack of pedagogical ability and gender awareness in their own teaching practices.

Visit to Chancellor College (8 Oct. 92)

We talked with Joseph P. G. Chimombo in the Research Section about ongoing projects or plans in educational research at the College. Not much is going on, other than exploring what might go on. We discussed the 1987 IDA financed study on Malawi Primary School Quality. Apparently there are some reservations about sampling procedures and the fact that some data sets were never completely analyzed. The coordination of the research process itself was a problem, those coding the data not being involved in the analysis, and so on.

⁹ Class of 1992	Boys	Girls
1A	81	76
1B	88	60
2A	42	52
2B	51	44
3A	54	56
3B	48	50
4	70	44
5	56	50
6	50	21
7	26	20
8	21	14

The study is however interesting in that it looks at quality in terms of learning achievement and the different inputs that have a positive impact on learning. The study does not assess the quality of the primary curriculum as such and the extent to which curricular goals are reached. Nor does the study explore or analyze learning assessment strategies, although tests were especially designed for this study and girls apparently outperformed boys. This is an intriguing finding since boys outperform girls on the PSLC examination. Thus, this area deserves further research. The above mentioned study could be used as an input, although the original data sets have apparently disappeared.

We talked with the Head Librarian about GABLE and the Malawi Collection. Looked through a few Master's and doctoral dissertation studies but found nothing interesting about girls' education and achievement in particular. Ordered a few statistical printouts on student profiles at Chancellor College from the computer room.

Meeting with MIE Department Heads (7 Oct. 92) ¹⁰

We explained the different areas where GABLE will have a direct input (in the form of lecturing and writings on "gender") in the ongoing curriculum revisions:

- 1) curriculum development workshops for writers to share topics for unit development and review instructional materials;
- 2) trial testing instructional materials through classroom observation, teacher interviews and expert judgement;
- 3) teacher training and orientation to gender appropriate curriculum implementation and learning assessment.

We agreed that GABLE would include in the GTZ/MIE Evaluation Manual a set of criteria for trial testing instructional materials from a gender perspective and that guidelines would be prepared for the other proposed activities.

It was pointed out that the instructional materials evaluation schedule (in the manual) had to be revised to match the new evaluation targets. Instructional materials for General Studies need to be produced up to grade 4 only, but Needlecraft teachers' guides are needed from grade 3 to 8. It was also pointed out that supplementary materials did not figure in the schedule, although they are supposed to be produced along with the other books, although not by GABLE.

A discussion followed as to which supplementary materials are needed. Since no decision had been made in the past, it was agreed to hold a workshop on supplementary materials development at MIE. Potential areas might be a) providing family life education (FLE) in primary schools; b) helping teachers teach mathematics and science, i.e., using the science kit; c) written materials such as readers to promote literacy; d) and a collection of games and songs for pupils.

It was also suggested that MIE sensitize contractual writers to the development of gender appropriate instructional materials. For this purpose the gender lecturer should train other MIE staff in

¹⁰

Ms. Kabwila, Mrssr. Mchazime, Mateche, Gonthi, Kaphesi, Mtunda.

gender analysis. Since the teaching syllabi cannot be corrected nor adjusted, it is crucial that at least the new teachers' guides be designed according to the new criteria and guidelines for instructional materials development. Moreover, an additional budget is needed to pay honoraria to experts involved in writing and trial testing textbooks.

Finally, it was strongly recommended that written records of education policies and circulars be collected, updated, reviewed and eventually discussed with the MOEC. The elaboration of a new education policy paper should be considered. Areas that need to be clarified include seating arrangements by gender and the scheduling/teaching of needlecraft, home economics and science in primary schools.

Meetings (9 Oct. 92)

Met with Krist Poffyn, a Belgian, instructor of Classics at Chancellor College (until December of this year). He is also a student of anthropology and has been videotaping initiation ceremonies in a Zomba rural community. He has about ten hours of video tape, mainly of boys' initiation ceremonies (Jando and Chitototo) of Yao and Chichewa youths. Has attended some girls' initiation rites. Currently he is looking for financial support to do a PhD in anthropology as well as for assistance in translating Chichewa and Yao.

Apparently, the initiation rites can last anywhere from a few weeks to six months. The financial burden on parents is substantial for food and clothing (a new suit for the boys may cost as much as 40 Kwacha). The proceeds go to the mentors and the traditional village authority. The groups comprise up to 15 boys or girls of different ages. The rituals involve a lot of singing and repeating the same verses. Circumcision for boys is practiced with the same knife. It seems that girls' circumcision is still prevalent in Malawi but done at an early age. In a boys' ceremony young boys and older men take part. If initiation mentors for girls' are mainly older women, who teach girls how to become good wives. Anti-AIDS efforts, family planning or sex education are apparently not attempted at all.

While some ethnic groups may adopt songs from other groups, it is not clear to what extent modern culture and social life influence the overall fabric and nature of initiation ceremonies. There seems to be some outside influence in terms of promiscuity and truancy, which apparently have no relation to traditional initiation practices. Some researchers tend to believe that since initiation rules and practices are so well established, there is no opportunity for any family life education, including AIDS related information. This belief may not be totally warranted, given the apparent flexibility of some groups to adopt new messages and meanings.

12 to 16 October, 1992

This week each of us attended different curriculum development workshops for writers of Standard 4 instructional materials, especially English, General Studies, Chichewa and Mathematics.

Substantial revision and rewriting took place, so that the workshop will have to resume within two weeks to finish the tasks. We had some interesting and heated discussions about gender stereotyping in teachers' guides and pupils books (some examples will be reported in the guidelines for the writers workshop). The English texts particularly benefited from gender awareness, as did General Studies. For instance, the traditional authority system was reviewed in light of the citizens' place in it (i.e., their duties and rights), which also led to questions about the impact of culture and tradition on contemporary education policy and practices (i.e., pregnancy policy vs. initiation rites or gender structuring in the

classroom vs. modern teaching styles). The likely impact of seating arrangements on pupil achievement was questioned, and rightly so. However, the affective aspects of cognitive development should also be taken into consideration when assessing achievement or learning outcomes.

Met Lynellyn Long (USAID) and Sharon Collins (Chancellor College). We mainly discussed the need to develop a family life education curriculum and to establish links with the population health community. We will pursue our efforts along these lines.

Met again with K.Poffyn and Prof. Whittle from Chancellor College. We agreed to have a seminar on gender issues in primary, secondary and tertiary education early next year when the College should be open again. In the meantime, however, we felt it important to organize, as soon as possible, a workshop/seminar at MIE for the subject specialists with a view to developing a family life education (FLE) curriculum for primary schools. Krist Poffyn's video tapes should be part of the resource materials for discussion as well as other available instructional materials and studies (i.e., on AIDS and initiation rites). Moreover, we should be thinking about possible links between FLE and the primary science project, GABLE and other public health initiatives, such as anti-AIDS efforts. Perhaps this could become a (small research) project.

Visit to the Center for Social Research

The Center has an important section on women and development, mainly agriculture and health related materials. We reviewed the scant available girls' and women's education literature and came away with the same thoughts we had after visiting the Malawi Collection in the Chancellor College Library: Not much basic, descriptive research, a lot of hypotheses about statistical data, some interesting syntheses of old policy related studies. Two noteworthy papers were by J. Davison and K. Hyde.¹¹

The Center has just compiled an annotated bibliography on its women and development resources. It is clear to us that the MIE Library has great potential for establishing its own library on girls' and women's education to the benefit of the other libraries we visited so far.

Meeting with MIE Principal

With H. Siege (GTZ) and the MIE Principal we discussed a potential research project, which we would plan during the next few months. The research would be applied and would focus on the implementation of the new curriculum and associated teacher training, as well as learning assessment practices in the core subject areas. Its overall objective would be to contribute to the development of effective strategies to improve teaching/learning in primary schools for both boys and girls.

GTZ has a budget for technical assistance to facilitate the implementation of the primary science project. These funds can also be used for research related activities, such as collecting baseline data on primary teacher training in science. Since both GTZ and GABLE are involved in ongoing curriculum development, it is highly desirable that any proposed research related activities be coordinated and/or carried out jointly, including financing.

¹¹ Karin A.L. Hyde. Female Education in Malawi: Problems, Priorities and Prospects. Paper presented at the Conference on Educational Research in Malawi, Chancellor College, August 23 to 27, 1992.

The MIE Principal welcomed our suggestions and made it clear that any curriculum evaluation project should be based and managed at MIE with the assistance of the Center for Educational Research at Chancellor College and the Malawi Examination Board. The MOEC and the National Research Council would have an advisory role. Since Malawi has little educational research capacity, a major goal would be to strengthen it through the proposed project as well as through the establishment of professional links with (a) foreign educational research institution(s).

We agreed to refine our thinking on the research project, the issues and questions we would want to address. Classroom level research would be important, including for instance an analysis of (a) cultural support for curricular content and modern teaching styles in primary education in Malawi, and (b) the impact of classroom conditions (double shift, multigrade, class size, etc.) on the implementation of the intended, revised curriculum. The first topic would be particularly relevant for GABLE. A few studies on gender differences in educational participation and attainment in Malawi suggest that female students' attainments are more constrained by socio-cultural factors than by ability. Cultural factors, such as gender-based stereotypes and expectations, still shape and constrain girls'/women's educational opportunities.

We agreed that the proposed research project should have policy and practical implications for curriculum development and implementation and should go beyond the usual question of assessing which inputs have a greater impact on learning "in general" than others (i.e., classroom size, level of teacher training, or textbook availability).

Since no additional funds are available in the current GABLE program, we will explore other funding sources for educational research, such as USAID/WID/EDUCATION and the Rockefeller Foundation in Nairobi. Funding should also be sought under the current IDA Second Sector Credit (Staff Appraisal Report 1990). The available funds for technical assistance in curriculum evaluation (at least 3 staff months for 1993) should be tapped.

Meetings in Lilongwe, October 20-22, 1992¹²

We attended the GABLE program implementation update meeting at MOEC. In regard to the budget revisions of the Gender Appropriate Curriculum Unit, it was decided that the necessary adjustments (i.e., type of vehicle and computer to be purchased) would be settled within a week among MIE and PIU staff. To successfully implement the GABLE program, both items should be purchased as soon as possible. Apart from the delay of the GABLE office construction (which began on October 18) program implementation is on target.

Our meetings at MOEC mainly involved briefing key officers on the progress of the GABLE program. In regard to curriculum implementation and evaluation, we stressed the need to train teachers as of first grade (and not 8th grade because of the PSLC examination) in learning assessment strategies with the assistance of MANEB. Continuous assessment of pupil learning is necessary for evaluating curriculum implementation.

¹² Met with Mr. V.S. Chamdimba, Principal Inspector of Schools (Science) and the director of Primary Education at MOEC; Mrs. Mary Shaba (Nutrition Specialist), Ministry of Women and Children Affairs and Community Services; Mr. Bill Mackie, AED/AIDSOM; and Ms. Felicity Malewezi, UNICEF; GABLE staff at USAID.

Early teenage pregnancy and family life education prospects in primary schools were our major concern in the other meetings. It became quite clear again that in the context of GABLE something must be done about teenage pregnancy. It is estimated that 68% of teenagers have childbearing experience at the age of 12 to 19 (AIDS related cases are prevalent in this group), and that many younger girls 8 years and older have been sexually active, voluntarily or not. An ever increasing number of girls drop out of school because of pregnancy. Parental attitudes are the main problem as well as cultural taboos. The Ministry of Women's and Children's Affairs and Community Services has developed a parent education program based on a problem centered approach to address total communication problems (which go as far as not admitting the simplest facts about human pregnancy). Parent education is more direct in its overall approach than family life education programs or the anti-AIDS efforts. MOEC has, however, approved the use of appropriate parent education materials for primary schools, since they have been successfully used in secondary schools with both teachers and students. Both the AIDSCOM¹³ and parent education materials will be made available to the MIE library. Key staff from these organizations will also be invited as resource persons to the planned workshop on supplementary instructional materials for primary education at MIE, to be organized by GABLE. It is crucial that existing supplementary materials on family life education be fully integrated into the curriculum and that teachers be oriented to their use in the classroom.

¹³ These materials comprise a total of 13 pupil and teacher books, posters, video films and even a mobile health education band.

Reasons for dropping out by standard - Girls (in percents of total dropouts for standard)

Reason	Std 1	Std 2	Std 3	Std 4	Std 5	Std 6	Std 7	Std 8
Truancy	13%	7%	8%	6%	9%	12%	11%	7%
Pregnancy	0%	0%	0%	1%	1%	7%	5%	9%
Marriage	0%	0%	0%	0%	3%	3%	3%	9%
Fees	85%	90%	87%	88%	85%	75%	67%	68%
Illness	1%	2%	3%	2%	1%	1%	8%	2%
Loss of Vocation	0%	1%	2%	2%	1%	1%	6%	4%

Source: Lilon, USAID/MOEC, 1991

Repetitions rates by standard and sex

Standard	Boys' Repetition Rates	Girls' Repetition Rates
1	28%	23%
2	19%	21%
3	15%	17%
4	16%	16%
5	14%	14%
6	14%	18%
7	17%	18%
8	46%	44%

Source: L. ILCN, USAID/ MOEC, 1991

OBJECTIVES

By the end of this unit, your pupils will be able to:

- a. state the use of some household objects (Lesson 47)
- b. describe people and things using comparative adjectives (Lesson 48)
- c. punctuate sentences (Lessons 48, 49)
- d. use the present continuous and present simple tenses correctly (Lesson 49)
- e. obey polite commands (Lesson 49)
- f. read a story fluently and answer comprehension questions (Lesson 49)
- g. do language exercises (Lesson 50)

SUMMARY OF ACTIVITIES

To achieve these objectives, you will:

- get the pupils to state the use of household objects
- get them to describe people and things using comparative adjectives
- get them to punctuate sentences
- get them to use the present continuous and present simple tenses correctly
- get them to obey polite commands
- get them to read a story fluently and answer comprehension questions
- get them to sing the alphabet song.

TEACHING AND LEARNING AIDS

You will need:

- pupils' books
- pictures and drawings/sketches on the blackboard
- realia.

TEACHING ACTIVITIES

LESSON 47

Activity 47.1 - Naming Things (5 minutes)

Revise naming classroom objects. Refer back to sid 2 and transfer the work here.

Activity 47.2 - Naming Household Objects (9 minutes)

Prepare pupils for the following story by asking the following questions:

- Who cooks *nsima* for you?
- What do you use for cutting down trees?
- What type of food do you like?

Now read the following story showing real objects where appropriate. Pre-teach any difficult words.

Say: Listen to this story about Masozzi's mother and aunt.

Masozzi's mother lives in the village. She cooks food for the family. She pounds maize. She uses a pestle and a mortar for pounding the maize. She cuts firewood with an axe. She uses the firewood to make a fire. She puts a pot on the fire. She uses a cooking stick for cooking. She takes flour from a basket. She puts the *nsima* in plates. The children eat *nsima* with their hands. They like *nsima* cooked by their mother.

Mrs. Phiri, Masozzi's aunt, lives in town. She cooks food for her family. She takes her maize to the maize mill to grind it. She uses an electric stove for cooking. She puts a pot on the stove. She uses a cooking stick for cooking. She takes flour from a basket. She puts the *nsima* on plates. The children eat the *nsima* with knives and forks. They like the *nsima*.

LESSON 78

Activity 78.1 - Contrasting Future, Simple Present and Simple Past Events (7 minutes)

Repeat activity 41.4

Activity 78.2 - Expressing Likes and Dislikes

(a) Presentation (4 minutes)

Draw on the blackboard.

- a boy playing netball.
- another boy playing football.
- a girl riding a bicycle.

Point to the first drawing and say:

Children, this is (Gerald).

He likes playing netball. Look he's playing it now.

Point to the second drawing and say:

This is (Mphahao). He likes playing football. He is playing it now.
Etc.

(b) Chain drill (4 minutes)

Demonstrate with three pupils as follows:

Ask: (Jane), does Mphahao like playing netball?

Jane: No, he doesn't. He likes playing football.

(Mavuto) does Mphahao like playing netball?

Mavuto: No he doesn't. He likes playing football.

Do the same with the remaining situations.

(c) Group work (7 minutes)

Tell the pupils to get into their groups and do the chain drill. Get the group leaders to start the drill.

Activity 78.3 - Reciting a Poem (8 minutes)

Teach this poem as in activity 18.1

TWO FAT WOMEN

Two fat women met at a market

Bowed most politely, bowed once again:

How do you do?

How do you do?

How do you do again?

Two clever school boys met at a market

Bowed most politely, bowed once again:

How do you do?

How do you do?

How do you do again?

Two little children met at a market

Bowed most politely, bowed once again:

How do you do?

How do you do?

How do you do again?

Do the same with another pupil (Vifukwa):

You: Vifukwa, bring me that book.
 Vifukwa: Yes, sir. (Takes the book but drops it.)
 You: Stop playing Vifukwa?
 Vifukwa: I'm sorry sir/madam.
 You: Be careful then.
 Vifukwa: I'm sorry, sir/madam.
 You: I don't want careless children in my class. Pick that book up.
 Vifukwa: Yes, sir/madam.
 You: Don't do that again.
 Vifukwa: I won't sir/madam.

(b) Demonstration pair (5 minutes)

Let Melissa and Vifukwa demonstrate the first dialogue, one playing the role of the teacher and the other that of a pupil. They should then change over.

(c) Pair work (4 minutes)

After the demonstration, tell the pupils to get into pairs and do the same.

[Note: From now on express anger whenever an occasion arises e.g. when a pupil is late or making a noise etc.]

Activity 113.2 - Role Play (7 minutes)

Get pupils to practice expressing anger in the following roles: mother/father and son/daughter

Situation: A child has broken a household item e.g. a plate, a glass, a window, a cup, etc.

E.g. Father: Who broke this cup?
 Daughter: I did father. I'm sorry.
 Father: Don't do that again!
 Daughter: I won't, father.
 Father: Next time, I'll punish you.

Activity 113.3 - Reading (12 minutes)

Repeat activity 111.1. This time they should not answer the questions.

LESSON 114

Activity 114.1 - Expressing Anger Again (10 minutes)

Repeat activity 113.2, creating as many situations as you can for the pupils to practice how to express anger.

Activity 114.2 - Expressing Fear

Draw stick figures of a boy and a girl on the blackboard. Point to each figure as you read this story:

(a) Presentation (3 minutes)

Say: Mabvuto likes dogs. His father has got three dogs. They are big dogs. Mabvuto likes playing with them. Sometimes he likes carrying them in his hands. He plays with them all the time. He is not afraid of them. But Misi does not like dogs. She doesn't like playing with them. When she sees a dog, she runs away. She is afraid of dogs.

Ask: Are you afraid of dogs?
 Ask about other animals - snakes, cows, goats, hyenas, lions, etc.

1991

Answer all questions.

(Each question carries 4 marks)

1. A farmer is raising fish in ponds and also rearing ducks.

Explain:

a. How raising of fish helps in the rearing of ducks.

b. How rearing of ducks helps in the raising of fish.

a. _____

(2 marks)

b. _____

(2 marks)

2.



The diagram above shows a farmer carrying out a certain farm operation.

a. What is the farmer doing?

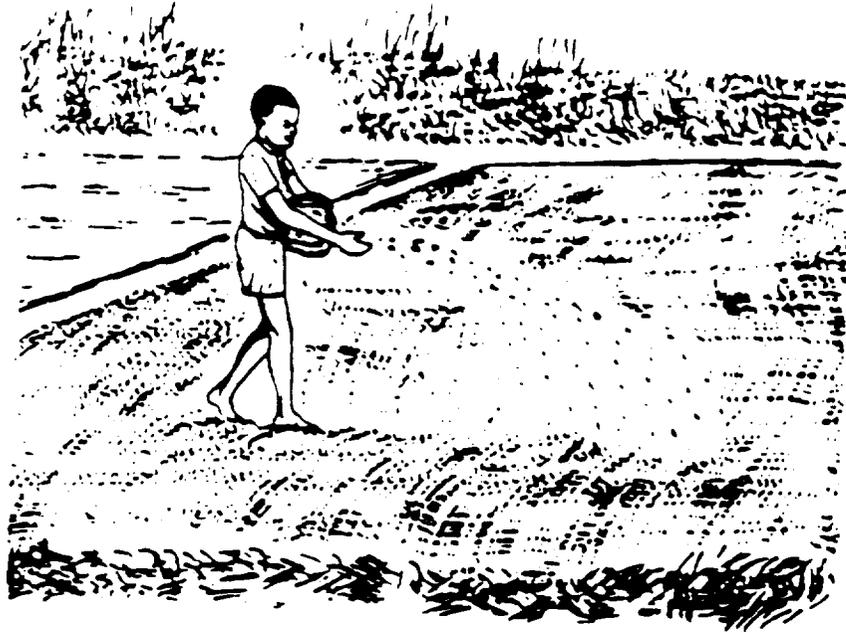
(1 mark)

b. Give *one* reason why the farming operation is wrong.

(1 mark)

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20. The diagram below shows a method of planting.



a. Name the method of planting.

(1 mark)

b. Give *one* example of a crop which is sown using this method.

(1 mark)

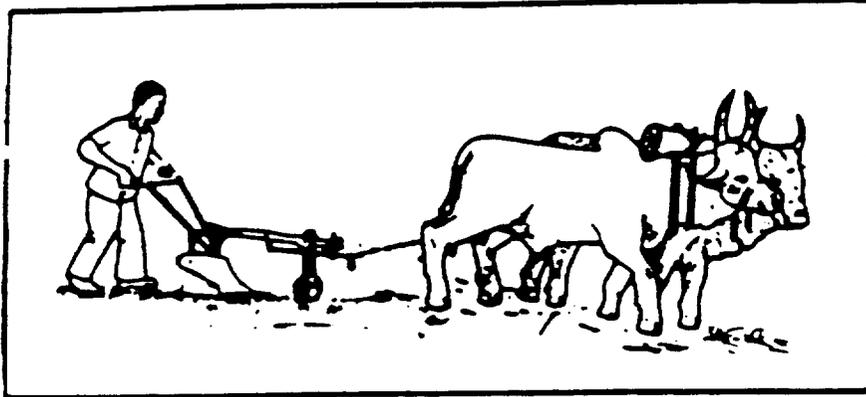
c. Give *one* reason why this method of planting is suitable for the crop named in (b) above.

(2 marks)

Continued/...

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15. Diagrams A and B show sources of power on the farm.



A



B

a. Name each source of power.

A _____

B _____

(2 marks)

b. If a farmer had 4 hectares of land, which of the two sources should he use?

(1 mark)

c. Give *one* reason for your answer.

(1 mark)

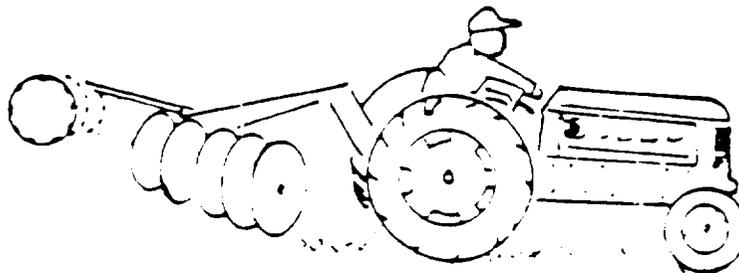
16. A farmer has 0.5 hectare of land to be planted to hybrid maize. The recommended seedrate is 25 kg per hectare.

a. How much seed should he buy? Show your working.

(2 marks)



9. The diagram below shows a source of power on the farm.



a. Name the source of power.

_____ (1 mark)

b. What is the advantage of using such a source of power?

_____ (1 mark)

c. Give two disadvantages for such a source of power.

(1) _____

_____ (1 mark)

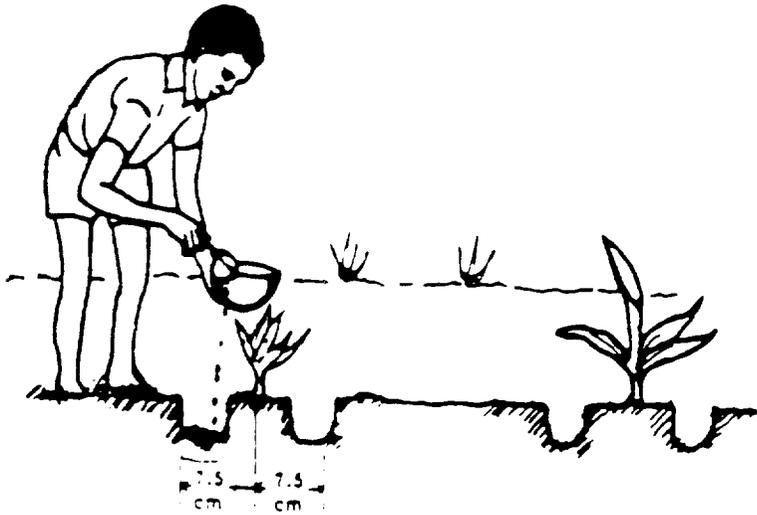
(2) _____

_____ (1 mark)

continued/...

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10. The diagram below shows a method of applying fertilizer to maize.



a. Name the method.

_____ (1 mark)

b. Why should the fertilizer be placed 7.5 cm away from the planting station?

_____ (1 mark)

c. Name TWO other methods of applying fertilizer to crops.

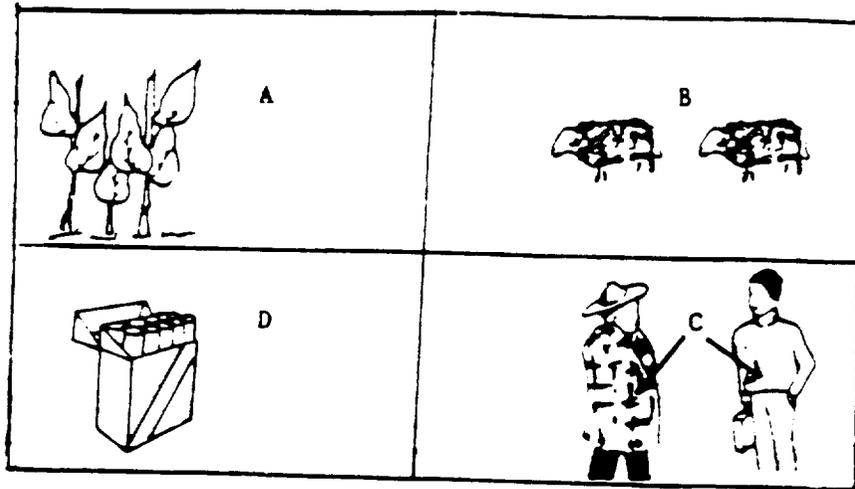
(1) _____ (1 mark)

(2) _____ (1 mark)

continued/...

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7. The diagram below shows that Agriculture is the source of raw materials.



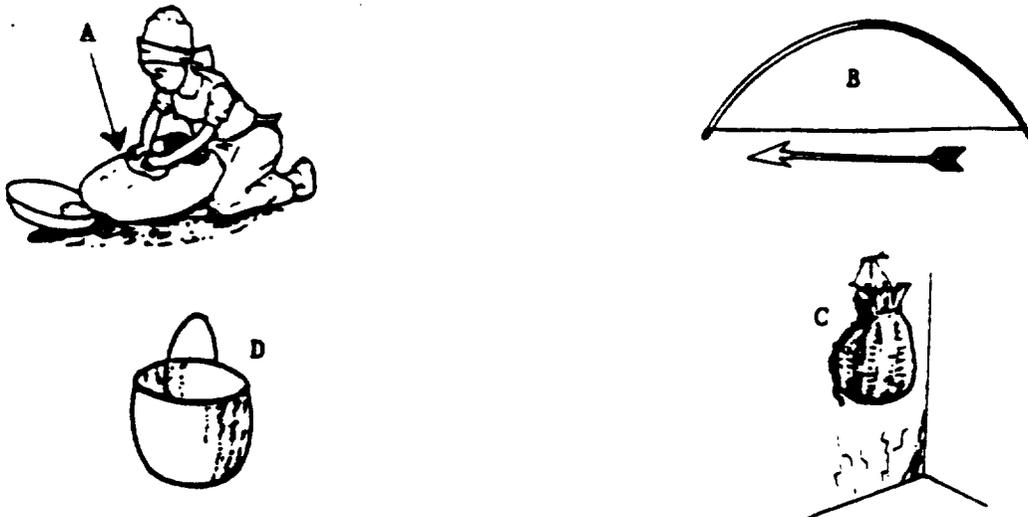
a. Name the raw material from sources labelled A and B.

A: _____ B: _____ (2 mark)

b. Name the products labelled C and D.

C: _____ D: _____ (2 mark)

8.



The diagram above shows some tools used by early farmers in Malaŵi.

a. Name the tools labelled A and D

A _____ (1 mark)

D _____ (1 mark)

b. What were B and C used for?

B _____ (1 mark)

C _____ (1 mark)

26. Look at the pictures below and answer the questions that follow:



a. What are both mothers doing?

b. Method A is called _____.

c. Method B is called _____.

d. Which is the best method? _____

e. Give TWO reasons for your answer in (d).

(i) _____

(ii) _____

(6 marks)

27. a. Weaning is introducing other foods to the baby's diet in addition to _____

(1 mark)

b. List three healthy habits in training toddlers.

(i) _____

(ii) _____

(iii) _____

(3 marks)