

Retrospective Study on Girls' Education in Mali and the Use of the Simulation Model for Education Management

A project funded by the Office of Women in Development, Bureau for Global Programs, Field Support and Research, U.S. Agency for International Development, under contract number FAO-0100-C-00-6005-00 with Development Alternatives, Inc.

August 2002



1717 Massachusetts Ave. NW, Suite 302, Washington, DC 20036 USA
Tel.: 202-332-2853 FAX: 202-332-8257 Internet: WIDinfo@widtech.org

A Women in Development Technical Assistance Project

Development Alternatives, Inc. \$ International Center for Research on Women
Academy for Educational Development \$ Development Associates, Inc.

This publication was made possible through support provided by the Office of Women in Development, Bureau for Global Programs, Field Support and Research, U.S. Agency for International Development, under the terms of contract number FAO-0100-C-00-6005-00. The opinions expressed herein are those of the author and do not necessarily reflect the views of the U.S. Agency for International Development.

Retrospective Study on Girls' Education in Mali and the Use of the Simulation Model for Education Management

by

Francine Ahouanmènou-Aguez

Development Alternatives, Inc.

August 2002



ACRONYMS AND ABBREVIATIONS

AE	Education Academy
BEEP	Basic Education Expansion Project
CPS	Center for Statistics and Planning
DNEB	Basic Education Division, National Level
EF	Basic Education
EFA	Education for All
MOE	Ministry of Education
PISE	Medium-term Investment in Education Program
PRODEC	Ten-Year Guideline Policy for Educational Reform
PTF	Technical and Financial Partners
PVO	private voluntary organization
SAGE	Strategies for Advancing Girls' Education Project
TBS	gross enrollment rate
TNS	net enrollment rate
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UPE	universal primary education
USAID	United States Agency for International Development
WE	World Education

ACKNOWLEDGMENTS

The author and the entire assignment team would like to thank all of the participants in the workshop held August 9–16, 2002, in Ségou, and all those, near or far, who helped us complete this mission. We would like to mention in particular:

- Mrs. Traoré Korotoumou Konfe, gender specialist in the USAID/Bamako Education/Youth team, for her dynamism and assistance, which gave us guidance throughout this mission;
- The USAID Education/Youth team;
- Mr. Modibo Diallo and Mr. Baba Modi Camara of the CPS, for their significant collaboration and help during the presentations;
- Mr. Bakary Casimir Coulibaly, director of the Ségou Education Academy, and Mr. Mamadou Diabaté, BEEP division head, for their support; and
- Our team leader, Akanksha Marphatia, for her skills in leading a group and her open-mindedness in encouraging collaboration, which allowed us to complete this mission in a cordial atmosphere of intense work.

TABLE OF CONTENTS

1. INTRODUCTION.....	1
Context	1
Terms of Reference	2
2. RETROSPECTIVE STUDY ON GIRLS' EDUCATION IN MALI	2
Objective of the Study.....	2
Methodology of the Study.....	2
3. EVOLUTION OF BASIC INDICATORS	3
Gross Enrollment Rates.....	3
Grade-Repetition Rates	6
4. EFFORTS TO STRENGTHEN THE EDUCATIONAL SYSTEM FOR GIRLS' EDUCATION	8
5. THE SIMULATION MODEL	10
Workshop Presentation of the Simulation Model and Retrospective Study	11
6. GIRLS' EDUCATION BY THE YEAR 2015	13
Projections.....	13
Conclusion.....	15
7. PLAN FOR MONITORING AND EVALUATING INVESTMENTS AND PROGRAMS FOR STRENGTHENING GIRLS' EDUCATION	16
Current Situation	16
Proposal for a Monitoring Plan.....	16
8. CONSTRAINTS	17
9. RECOMMENDATIONS	17
ANNEX 1: TERMS OF REFERENCE	1-1
ANNEX 2: ELEMENTS DU MODELE DE SIMULATION ET SYNTHESE DES SUGGESTIONS (EN BLEU ET SOULIGNE)	2-1
ANNEX 3: PRESENTATION DE L'ETUDE RETROSPECTIVE EVOLUTION DE L'EDUCATION DES FILLES AU MALI	3-1

LIST OF TABLES AND FIGURES

Tables

1	Gross Enrollment Rates, First-Level Primary Education (+ Medersas), 1989–2000.....	3
2	Gaps in Gross Enrollment Rates, 1989–2000	5
3	Gross Enrollment Rates by Region, 1997–2000	6
4	Average Grade-Repetition Rates (Boys and Girls) at the First Level of Primary Education.....	6

Figures

1	Gross Enrollment Rates, First-Level Primary Education (+ Medersas), 1989–2000.....	4
2	Net Enrollment Rates, First-Level Primary Education (+ Medersas), 1989–2000	7
3	Past and Projected Gross Enrollment Rates, First-Level Primary Education (+ Medersas), 1990–2015.....	13
4	Past and Projected Net Enrollment Rates, First-Level Primary Education (+ Medersas), 1990–2015.....	14

1. INTRODUCTION

Context

Mali, like many countries in Africa, is implementing an education development program. This program, the Ten-Year Guideline Policy for Educational Reform (PRODEC), adopted in 1998 and covering the years 2000 to 2010, sets objectives and strategies for the country's goals of reaching a gross enrollment rate of 75 percent at the first level of primary education by 2008 and of reaching 95-percent universal primary education (UPE) by 2015.

The Malian educational system includes two levels of primary schooling: The first lasts six years and covers children from 7 to 12 years old; the second follows the first and lasts three years. Next come the secondary level of schooling (four years of studies) and the advanced level of schooling.

The 1998–1999 gross enrollment rates¹ given by the Center for Statistics and Planning (CPS) of the Ministry of Education (MOE) were 42.3 percent for girls and 59.2 percent for boys at the first level of basic education, excluding the medersas (religious schools). The rates are more favorable if one includes the medersas: 46 percent and 65 percent, respectively (see Table 1). In 1999–2000, the gross enrollment rates reached 50 percent for girls and 72 percent for boys. During the second level of basic education, however, the rates are markedly weaker: In 1999–2000, the rate barely exceeded 15 percent for girls in regions other than Bamako (where, however, the rate reached 83 percent). As for boys, the enrollment rate in the second level varies in the regions between 10 percent and 35 percent and reaches 77 percent in Bamako.

The simulation model examined in this report was developed by the MOE in collaboration with UNESCO, primarily for data collection purposes. The model was one of the initiatives implemented in the context of PRODEC to meet the needs of Mali's educational system and to plan strategies. Given the complexity of the model and the difficulties in using it, the ministry, in collaboration with the World Bank, attempted to simplify it to make it more useful and easier to apply.

This mission falls under the framework of training training personnel in “the integration of tools and gender strategies into the curriculum.”² It should allow for the use of the simulation model to identify possible strategies for achieving UPE in general and increasing the rate of girls' education in particular.

¹ The gross enrollment rate = in-school population / population capable of attending school (7 to 12 years old)

² “The Integration of Gender into Curriculum Development at Level I of Basic Education in the Republic of Mali (Phase I),” WIDTECH, Marphatia, A.

Terms of Reference

The main activities of this consultancy were to:

- Conduct a retrospective study of the level of investment in girls' education in Mali over the past 10 years;
- Analyze the evolution of girls' education in Mali over the past 10 years; and
- Improve the current simulation model.

The author will also develop a monitoring and evaluation plan for tracking investments and their impact on girls' education, with the objective of achieving UPE.

Results and recommendations will be presented to decision-makers in the MOE and USAID during a workshop on gender and curriculum. (The details of the terms of reference are included in Annex 1 of this report.)

2. RETROSPECTIVE STUDY ON GIRLS' EDUCATION IN MALI

Objective of the Study

The objective of this study is to analyze the past 10 years of:

- Progress in girls' education; and
- Efforts agreed to by the Malian government and, in particular, the MOE for girls' education.

Methodology of the Study

This analysis describes and reports on the efforts and results achieved in girls' access to education, their retention, and their performance in Mali. It also discusses bilateral and multilateral efforts, which are generally conducted in collaboration with the Government of Mali. The study includes meetings and interviews with relevant individuals, an analysis of related documents, and the study of statistical directories.

3. EVOLUTION OF BASIC INDICATORS

The promotion of girls' education has been, since the Jomtien Conference³ in 1990, a high-priority strategy on a global level. Nonetheless, the rate of girls' education has been and remains very weak in all developing countries, even though girls' and women's education is a determining factor in development. Mali is not being left behind in this process of promotion of girls' education, which will contribute to education for all.

Some basic indicators of the Malian educational system are analyzed below; specifically, those for the first level of primary, or basic, education.

Gross Enrollment Rates

Definition

The gross enrollment rate in this context is defined as the ratio or quotient of the population of school age (in this case between 7 and 12 years old) that is attending school compared with the population capable of attending school.

- Gross enrollment rate (also referred to as TBS) = in-school population (7 to 12 years old) / population capable of attending school (7 to 12 years old)
- Net enrollment rate (also referred to as TNS) = in-school population (7 to 12 years old) / population capable of attending school (7 to 12 years old)

Table 1: Gross Enrollment Rates, First-Level Primary Education (+ Medersas), 1989–2000

Academic Year	Gross Enrollment Rate (7 to 12 years old)			Net Enrollment Rate (7 to 12 years old)		
	Girls	Boys	Total	Girls	Boys	Total
1989–1990	18.9%	33.2%	26.0%	15.4%	25.8%	20.7%
1990–1991	19.5%	34.0%	26.7%	16.2%	27.3%	21.8%
1991–1992	21.4%	36.1%	28.8%	17.3%	28.6%	23.0%
1992–1993	24.7%	40.8%	32.8%	19.2%	30.2%	24.7%
1993–1994	27.9%	44.9%	36.4%	21.9%	34.7%	28.3%
1994–1995	31.3%	46.9%	39.1%	28.4%	39.6%	33.9%
1995–1996	33.4%	51.3%	42.3%	26.2%	39.7%	32.9%
1996–1997	36.5%	57.0%	46.7%	29.7%	46.6%	38.2%
1997–1998	40.3%	59.9%	50.0%	32.6%	47.1%	39.9%
1998–1999	46.0%	65.0%	55.6%	36.2%	50.6%	43.5%
1999–2000	50.0%	72.0%	60.9%	---	---	---

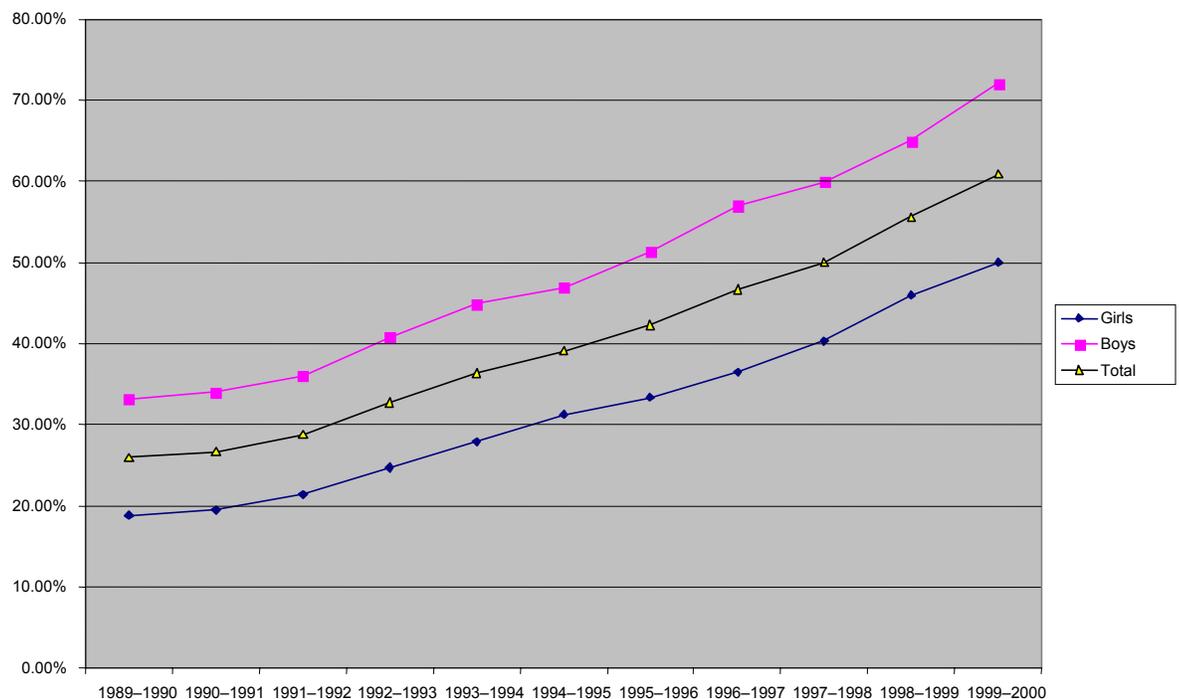
Source: Center for Statistics and Planning, MOE

³ Global conference on education for all, held in Jomtien, Thailand, March 5–9, 1990, by UNESCO, UNICEF, UNDP, and the World Bank. These four institutions were joined by a dozen partners, including governments and NGOs.

Observation 1: The rate of girls' schooling has more than doubled in 10 years.

In analyzing the table above and the corresponding figure below, one can see that in the past 10 years, the rate of girls' education in Mali has more than doubled, from 19 percent in 1990 to 50 percent in 2000. This is due primarily to the democratization of education, the enthusiasm created by the worldwide Education for All initiative, and the promotion of girls' education after the Jomtien Conference. Major partners in the effort to increase girls' enrollment include the Malian government through the MOE; USAID, which has provided direct financing to the government and technical assistance; international and national private voluntary organizations (PVOs) and nongovernmental organizations (NGOs), which have financed interventions on the ground; UNICEF; and the Netherlands. Other partners include the World Bank, the African Development Bank (AfDB), and UNESCO, to mention only a few.

Figure 1: Gross Enrollment Rates, First-Level Primary Education (+ Medersas), 1989–2000



Observation 2: Has the system progressed at the same pace overall?

The Malian educational system is progressing more for boys than for girls, with the gap in gross enrollment rates for girls and boys widening from 14 to 22 points since 1989, as Table 2 shows. All efforts to promote girls' education seem to benefit boys even more, as several studies have shown.

Table 2: Gaps in Gross Enrollment Rates, 1989–2000

Academic Year	Gross Enrollment Rate (7 to 12 years old)		
	Girls	Boys	Gap
1989–1990	18.9%	33.2%	14.30
1990–1991	19.5%	34.0%	14.50
1991–1992	21.4%	36.1%	14.70
1992–1993	24.7%	40.8%	16.10
1993–1994	27.9%	44.9%	17.00
1994–1995	31.3%	46.9%	15.60
1995–1996	33.4%	51.3%	17.90
1996–1997	36.5%	57.0%	20.50
1997–1998	40.3%	59.9%	19.60
1998–1999	46.0%	65.0%	19.00
1999–2000	50.0%	72.0%	22.00

Source: Center for Statistics and Planning, MOE

Observation 3: Has the gross enrollment rate for girls reached 50 percent throughout the country?

The 50-percent rate for girls has not occurred throughout the country. Kidal, for example, still has a girls' gross enrollment rate of less than 30 percent and constitutes with Mopti and Tombouctou the weak spots in enrollment rate. Nevertheless, the latter two regions have experienced outstanding and encouraging progress. There, the gross enrollment rate for girls increased by more than 15 points from 1997 to 2000, from 21.4 percent to 37.1 percent in Mopti and from 24.2 percent to 39.4 percent in Tombouctou (see Table 3).

Observation 4: Why do some gross enrollment rates exceed 100 percent, and why is Bamako regressing?

Bamako, which had a girls' gross enrollment rate of 125 percent in 1997–1998, dropped to 108 percent in 1999–2000 (see Table 3).

Table 3: Gross Enrollment Rates by Region, 1997–2000

Region	Gross Enrollment Rate, 1997–1998			Gross Enrollment Rate, 1999–2000		
	Girls	Boys	Gap	Girls	Boys	Gap
Kayes	33.2%	54.6%	21.4	45.1%	74.2%	29.1
Koulikoro	42.8%	69.0%	26.2	53.4%	85.0%	31.6
Sikasso	34.4%	57.7%	23.3	41.7%	65.2%	23.5
Ségou	32.1%	53.5%	21.4	42.6%	64.7%	22.1
Mopti	21.4%	32.2%	10.8	37.1%	54.1%	17.0
Tombouctou	24.2%	33.7%	9.5	39.4%	54.8%	15.4
Gao	30.1%	41.8%	11.7	42.5%	61.5%	19.0
Kidal	20.3%	33.0%	12.7	26.5%	38.8%	12.3
Bamako	125.0%	153.1%	28.1	107.7%	108.8%	1.1
All of Mali	40.3%	59.9%	19.6	50.0%	72.0%	22.0

Source: Center for Statistics and Planning, MOE

A gross enrollment rate can exceed 100 percent if the size of the in-school population exceeds the size of the population capable of attending school. This situation is found where the in-school population includes a significant number of children who have either surpassed school age or have not yet reached school age. Ideally, the gross rate will equal the net rate because only school-age students are in school; few students repeat a grade, and most complete a normal school cycle without great delay. If the gross rate in Bamako tends to be 100 percent, it probably means that children older than 12 are fewer in number in the first level of basic education. Does this represent an increase in the quality of the system in Bamako? A more detailed study of net rates would allow us to determine this.

We can conclude by saying that although disparities in the Malian educational system continue by gender and by region, girls' education has progressed.

Grade-Repetition Rates

Grade-repetition rates have decreased slightly since 1991 for the first level of schooling in Mali (see Table 4).

Table 4: Average Grade-Repetition Rates (Boys and Girls) at the First Level of Primary Education

Academic Year	First Year	Second Year	Third Year	Fourth Year	Fifth Year	Sixth Year
1990–1991	30.4%	30.3%	38.9%	34.3%	35.9%	34.8%
1994–1995	18.0%	16.8%	21.3%	19.2%	20.7%	34.4%
1996–1997	13.6%	13.2%	18.4%	21.5%	26.5%	37.4%

Source: Center for Statistics and Planning, MOE

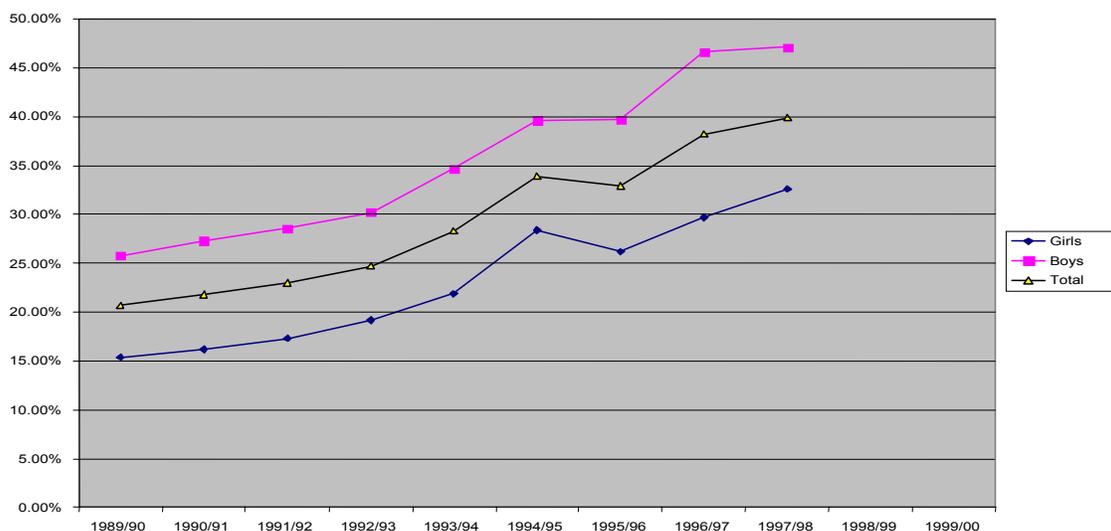
Observation 5: Grade-repetition rates are approximately the same for girls and boys; however, girls drop out more than boys in the fifth year and even more in the sixth year.

Although grade-repetition rates have decreased in recent years in Mali, they nonetheless are high. If we look at the grade-repetition and dropout rates in 1996–1997, out of 10 students entering in the first year, only 7 reach the sixth year (Educational System Indicators in Mali, 1998). Girls drop out of school at a higher rate than boys for several reasons, including religious and cultural practices (such as early marriage), safety and security issues (long distances from school, for example), the low quality of teaching and learning processes, and a lack of funds.

With these rates, the cost per student finishing the first level is very high; resources are wasted because three students are taking up a place in the system without reaching the sixth year. Furthermore, these rates do not encourage students, especially girls, whose opportunity cost is high for parents. These girls will have neither acquired a basic education nor been useful to their communities as girls not enrolled in school presumably have been.

The grade-repetition and dropout rates must be reduced to yield a direct and sizable impact from the investments made to strengthen Mali's educational system. It is thus desirable and necessary for an additional effort to be made to improve the quality of instruction, in order to achieve the objective of a 95-percent gross enrollment rate for girls and boys by 2015. A gross rate of 95 percent does not in itself signal the quality of an educational system, however; in order to achieve universal primary education, both gross and net enrollment rates should reach 95 percent.

Figure 2: Net Enrollment Rates, First-Level Primary Education (+ Medersas), 1989–2000



Observation 6: Net enrollment rates are progressing, and the trend is promising; however, current levels are far below the objectives set for 2008 and 2015.

Let us look again for a moment at gross enrollment rates. As noted earlier, the gross rates for girls' education in Mali have progressed considerably in the past decade, thanks to the joint effort of partners from the education sector. A concentration of efforts and assistance since the 1992–1993 school term especially has improved the trend. Looking at Figures 1 and 2, we can see that beginning in 1992, the slopes of the gross and net enrollment rates increase noticeably, indicating a greater progress rate. The impact of the partner efforts was thus greater and more visible in terms of school enrollment rates. Since 1994, the development partners have strengthened the educational efforts of the Government of Mali both technically and financially. The impact has been outstanding. The sorts of programs implemented are described below.

4. EFFORTS TO STRENGTHEN THE EDUCATIONAL SYSTEM FOR GIRLS' EDUCATION

Since 1990, the Malian government has worked to promote girls' education and the Education for All initiative. The establishment of the Unit for Girls' Education on national and regional levels and of the Special Commission for the Education of Young Girls are two examples. Additionally, awareness campaigns have been conducted throughout the country and have increased since 1998 with the work of PRODEC. Since then, the Unit for Girls' Education, established by the MOE, has undertaken activities on the regional and central levels. The regional centers are now more active than previously in concrete activities on the ground.

The MOE, in collaboration with technical and financial partners, has financed studies on gender and education in Mali, including a gender analysis of PRODEC. This study, along with an institutional analysis of the ministry itself, reveals a series of weaknesses in the integration of girls and their needs into the key elements of the PRODEC program. The studies also recommend activities to address these weaknesses. One of the recommendations suggests that the direction, strategy, and content of textbooks take better account of the instructional needs of girls (including image, roles, and positive messages for women and girls in relation to key development areas).

Following are brief descriptions of contributions from some of the technical and financial partners supporting the MOE's initiatives for girls' education.⁴

UNICEF: UNICEF provides financial support either by directly financing projects and programs or by supporting the MOE budgetarily through the government. Its assistance program in Mali included an education component in 1993, under which UNICEF contributed to the development of PRODEC. In 1998, UNICEF's quinquennial program had a particular focus on girls' education. The program aimed to advance the education of young

⁴ Mentioned here are some partners that were on the ground and available to meet the study team.

girls, in terms of both quantity and quality, and targeted Kayes and Mopti, which have some of the lowest education rates in the country for both girls and boys.

UNICEF is also the leader of the Special Commission for the Education of Young Girls, which also includes the MOE, the Netherlands, USAID, and UNESCO.

USAID: The USAID assistance program in the education sector in Mali began in 1990 with the Basic Education Expansion Project (BEEP). Girls' education was included among the project's five objectives. (The initial total cost of the project was US\$9 million to US\$10 million but rose to US\$41 million in 1995.) The major actions related to girls' education consisted essentially of negotiations with the government on the education of young girls and with donors for a multilateral project. Ministerial decrees thereafter led to the establishment of the Unit for Girls' Education.

After 1998 and through American PVOs (such as World Education, Save the Children, and SAGE), programs were implemented in the following areas:

- Support for community schools;
- Organization of training activities for instructors in girls' education; and
- Community awareness.

USAID is also intervening in Mali in the framework of the educational component of its Youth Strategic Objective Agreement, in the following ways:

- Budgetary support for the Government of Mali;
- Financing through PVOs/NGOs (such as World Education, Save the Children, and Africare); and
- Technical assistance (through SAGE, John Snow Inc./Programme Denmisenya Yiriwali, and WIDTECH).

The total amount of this education component, which includes objectives for the promotion of girls' education, is US\$5 million per year over five years.

The Netherlands: Dutch Cooperation, the Dutch government's development-aid agency, has been one of the major partners in girls' education in Mali since 1997. It began by supporting the Government of Mali in the framework of the preparation of PRODEC. Then, agreements were signed to provide budgetary support for educational development (in the areas of infrastructure, the quality of education, and girls' education). One of the bilateral agreements, at a total of 134,860,000 CFA (approximately US\$202,000), targeted girls' education and was used to finance microprojects and training for primary-school teachers. These activities were carried out by the National Center.

The Medium-term Investment in Education Program (PISE) is guiding implementation of PRODEC for 2002 to 2004. PISE's last framework agreement included dispersal of a total of 40 million Euros (approximately US\$39 million). Activities for the promotion of girls' education were included in this plan. A representative from Dutch Cooperation whom the

study team met recommended avoiding duplication of these efforts, which underscores the need to ensure the coordination and monitoring of PRODEC's implementation.

As can be seen in the partner descriptions above, the promotion of girls' education is a general component of the educational-development process and assistance programs in Mali. Only in the past three or four years have partners and the government earmarked budgets for girls' education. Activities within the Education for All initiative also directly contribute to girls' education. It is therefore difficult to tally all the investments made in girls' education in Mali and to single out all the resources involved.

In conclusion, it is clear that the efforts made by the MOE, its technical and financial partners, and Malian communities have led to real progress in girls' access to education in Mali. Nevertheless, the rate of girls' access to school is still far below the objective set for 2015 by the Education for All initiative. As for equity in access, the study team sees little change, and the problem of gender disparity persists.

5. THE SIMULATION MODEL

In the framework of PRODEC implementation to reach education for all, indicator monitoring is essential to direct and then evaluate PRODEC's results. It is important to monitor the evolution of school enrollment rates and performance. With the help of technology, this is becoming an easy task, via a computerized simulation model. Everyone at the decision-making level in the MOE should be able to use a simulation model to understand the implications of each decision and better integrate his or her activities in the context of PRODEC. One of the objectives of this mission was to analyze the current simulation model and evaluate its relevance to strategies promoting girls' education in Mali.

As noted earlier, this consultancy is part of the initiative to train personnel in "the integration of tools and gender strategies into the curriculum."⁵ It should allow for the use of this simulation model to identify possible strategies for reaching universal primary education in general and increasing the rate of girls' education in particular. According to the new *petit Robert French* dictionary, a simulation model is "a simplified representation of a process or a system." The simulation model currently installed at the MOE's Center for Statistics and Planning is still under development. This application, developed for the ministry in Excel by a World Bank consultant, includes four calculation sheets. The model has yet to be validated or distributed in the ministry.

The simulation model's major calculation sheet, Modbase, contains important elements for system management. The three other calculation sheets are Calbase, Modbase_region, and Calbase_region. Data such as the number of students and the number of instructors are not disaggregated by gender, which does not allow us to determine scenarios by gender.

⁵ "The Integration of Gender into Curriculum Development at Level I of Basic Education in the Republic of Mali (Phase I)," WIDTECH, Marphatia, A.

Furthermore, certain important elements, such as the training of instructors, are not explicitly included in the model.

The study team has determined that the calculations could be simplified as follows:

Example 1: Cell B322 contains a formula equal to the product $B651*B407$. By replacing the two factors with their values, we get $B322= B651*B407=F18*(B18/F18)=B18$. It would have been simpler, thus, to leave $B322=B18$, which would facilitate maintenance and upgrading of the model.

Example 2: The formulas are unnecessarily iterative from one sheet to another. For example, the formula of one cell on the Modbase sheet refers to a cell on the Calbase sheet, which in turn refers to other cells on the Modbase sheet.

Example 3: $ModbaseD28=CalbaseB14$. In other words, CalbaseB14 refers to Modbase cells. Calbase is an extra sheet that includes the Modbase formulas.

These examples make the model difficult to use without an interface or a user's manual. Furthermore, the model still is not being used in the ministry; therefore, the study team suggests the author be consulted on the following:

- The model's finalization;
- The creation of a user's manual;
- Training of ministry personnel; and
- The integration of data divided by sex.

For reasons previously mentioned, it was not possible to utilize this model either for the retrospective study or for analyzing the investments made in relationship to performance indicators and girls' access to schooling. However, the consultant took advantage of the opportunity during the gender and curriculum workshop to introduce the idea of the model and, more precisely, the statistical data related to primary education.

Workshop Presentation of the Simulation Model and Retrospective Study

The author and two representatives of the Center for Statistics and Planning (CPS), Messieurs Modibo Diallo and Baba Modi Camara, presented the simulation model at the August 2002 workshop to train personnel in the use of tools and strategies to integrate gender into curricula.

As noted above, the model is still being developed and can be used only after having been tested and validated by CPS directors. The team has therefore not performed a complete simulation.

During his workshop presentation, Mr. Diallo presented the qualitative and quantitative objectives of PRODEC, a series of statistics on primary education, and an analysis of the statistics' significance for PRODEC's monitoring and implementation.

The author then presented the simulation model and the different aspects of educational-system management that it encompasses. A discussion focused on the weaknesses in the model. Some of the comments and questions raised included:

- The statistical data on personnel and students are not disaggregated by gender.
- Is instructor training considered in the average cost of an instructor?
- Why not provide a statistics sheet on the educational projections?

After this discussion, the participants formed nine small working groups to analyze the elements the model addresses and to detail items required to complete the elements if necessary. Group members discussed the model's weaknesses to evaluate its effectiveness in monitoring the equality of Malian children's access to education and in implementing the gender and development approach. The groups spent more than an hour reviewing the list of elements and making suggestions, which are presented in French in Annex 3.

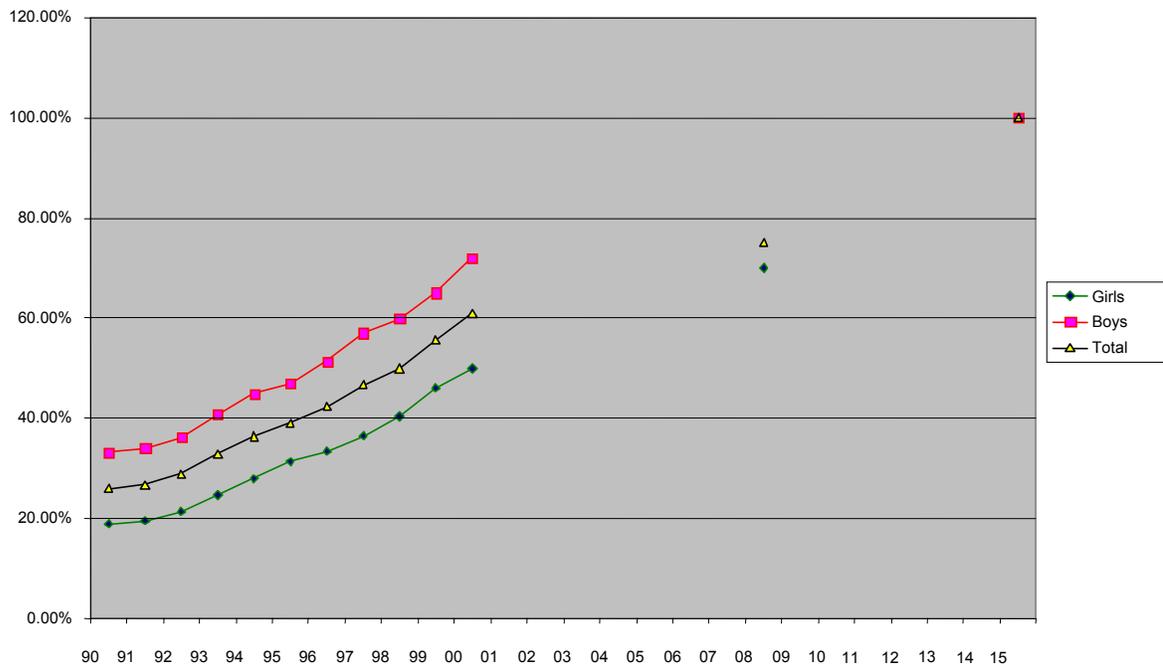
The author presented the retrospective study on girls' education in Mali during the same training workshop. This presentation essentially revisited the first part of the report and provided a synthesis of findings. Clarification of the different rates of schooling was provided, and the presentation concluded with the following recommendation: "[Ask yourself,] What can each of us do, at an individual level, to affect both supply and demand factors in order to reach the objectives for 2015?" The participants thus had the task of thinking of concrete steps they could take after the workshop to contribute to the objectives set for girls' education in Mali.

6. GIRLS' EDUCATION BY THE YEAR 2015

Projections

The following graphic shows past and projected gross enrollment rates for the first level of primary education in Mali. Projected figures are given for the two target dates of 2008 and 2015.

Figure 3: Past and Projected Gross Enrollment Rates, First-Level Primary Education (+ Medersas), 1990–2015

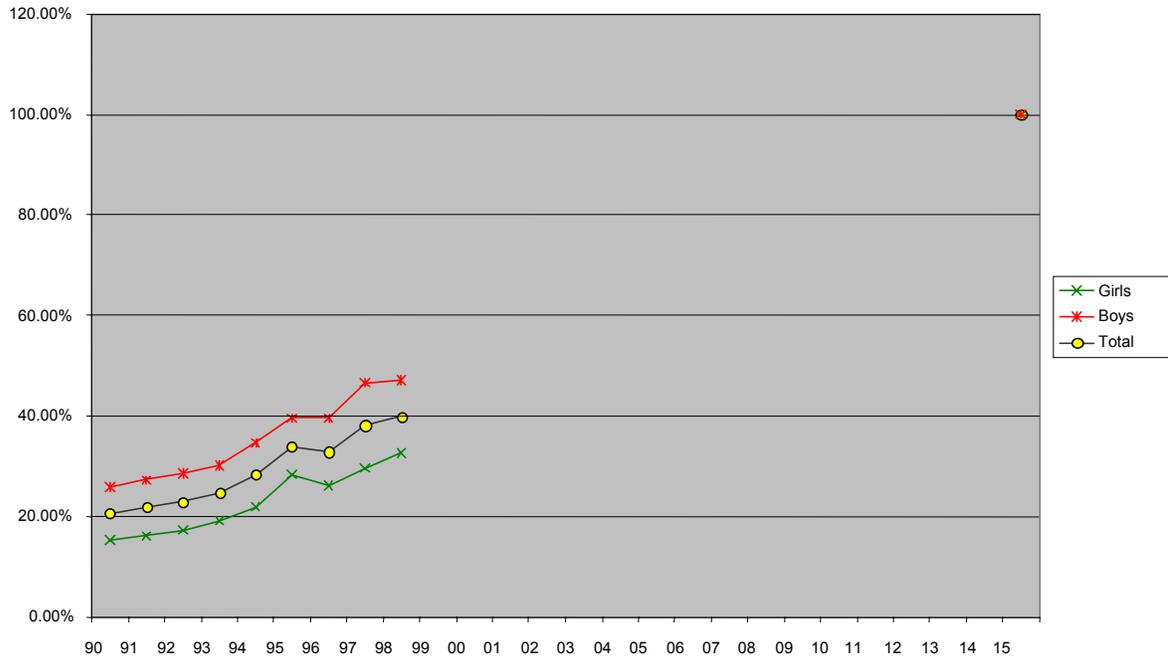


To reach the objective of 95-percent universal primary education by 2015, Mali's current rate of progress must be maintained. This would mean still a greater increase in the budget allocated for education, and for girls' education, which is progressing at a slower rate than boys' education. In other words, if the budget has doubled in 10 years, it will need to double again in the next 10 years.

Education's current share of Mali's national budget is 30 percent. We know it is difficult to exceed a threshold in terms of a percentage of the national budget. Indeed, it is almost impossible to maintain the current investment growth rate. Yet, we must allocate more resources to maintain a constant rate of school enrollment, given demographic growth. Where do we find these resources so that more children, and the growing number of children, have the chance to go to school and complete the first level of primary education?

If all children had access to school, would all parents want to send their children to school? The demand for education is also a factor to consider among the elements influencing educational-system indicators.

Figure 4: Past and Projected Net Enrollment Rates, First-Level Primary Education (+ Medersas), 1990–2015



The major factors that determine the rates of access to and performance in Mali's educational system are:

- Having different programs for the development and management of the educational system and the financial resources required for this management;
- Strengthening the quality of the educational system; and
- Demographic growth and communities' demand for education.

A more in-depth study on the influence of customs and the cost of education in Mali would allow us to proceed more easily with simulations for the future based on past years. We can nevertheless suggest the following implications and consequences, assuming resources will not decrease:

If resource levels remain the same in the next four years:

- If the system continues to yield the same returns, the rate of girls' education will decrease.
- If the system yields greater returns, school enrollment rates will remain the same or, at best, increase slightly.

If resource levels increase relative to demographic growth:

- If the system continues to yield the same returns, school enrollment rates will remain the same.
- If the system yields greater returns, school enrollment rates will increase.

If resource levels increase in the same proportion as during the past four years:

- If the system continues to yield the same returns, school enrollment rates will increase without, however, ultimately reaching a 95-percent gross enrollment rate, because a poor success rate ultimately produces the opposite of the desired effect. Repeated failures discourage students and parents, who no longer see any reason for attending or sending their children to school.
- If the system yields greater returns, school enrollment rates will increase and reach 100 percent— x percent, where x is the percentage of the population capable of attending school that does not, given the need, unfortunately, for employing children in manual labor or traditions that keep them out of school. Given that x is higher among girls than boys, it is clear that in 2015, boys will have reached 95 percent if x is less than or equal to 5, whereas girls will still be far from the goal. Girls, who have a much higher opportunity cost, corresponding thus to a greater x value, will show slower progress (as is already the case) and will have a school enrollment rate lower than that for boys.

Conclusion

For school enrollment rates to increase in Mali, and for girls' enrollment rates to increase in the same proportions, key innovative and integrated strategies will be required, and a synergy of efforts agreed to by all educational-system partners will be needed.

The educational system and the community—which schools are supposed to serve—work as a whole, with community demand interacting with educational-system supply. Therefore, educational interventions should be targeted as much at the supply side as at the demand side.

We should place particular emphasis on girls' education, without fear of reverse discrimination, because studies have shown that most initiatives to improve girls' education help boys as much as they do girls. We therefore need to influence demand for education by direct action in communities and by the supply of more appropriate education. Influencing demand requires effectively taking into account the needs and problems of communities.

7. PLAN FOR MONITORING AND EVALUATING INVESTMENTS AND PROGRAMS FOR STRENGTHENING GIRLS' EDUCATION

Current Situation

The CPS within the MOE is responsible for monitoring PRODEC's implementation. After the study team's meetings with members of the CPS, the team was unable to obtain any document that confirmed the PRODEC monitoring process or provided an update on PRODEC's implementation. Only the report of a recent multilateral mission organized by the ministry in collaboration with development partners seemed to update the situation. The team was thus unable to acquire any information on a PRODEC monitoring system. Such a system, were it operational and successful, would have guaranteed the monitoring of investments, financing methods, and progress achieved in girls' education.

Proposal for a Monitoring Plan

It is essential to implement a monitoring plan that is operational, to ensure the relevance and effectiveness of activities promoting girls' education that are implemented by partners of the educational system. There should be an overall monitoring strategy with a particular plan to monitor partners specifically targeting girls' education. The monitoring plan suggested below involves only the additional investments specifically reserved for the promotion of girls' education.

Objective: monitoring of investments, financing methods, and progress achieved in girls' education.

Activities:

1. Monitoring basic indicators of the educational system (enrollment, grade repetition, dropouts, promotions).
2. Monitoring programs for strengthening the educational system and promoting girls' education. One form per program could be updated regularly, with the meetings of the Special Commission for the Education of Young Girls being an ideal time for this update. The forms could include items such as:
 - Title and objective of the program;
 - Expected results and beneficiaries;
 - Date of program implementation;
 - Cost (technical assistance, budgetary support, direct support plus details);
 - Institutions financing the program;
 - Institutions implementing the program;
 - Progress accomplished and resources used (periodically); and
 - Impact on girls' education in the targeted areas.
3. Evaluation during the implementation (annual).

Responsible Parties: The CPS could be responsible for all of the system, with an active role in Activity 1 and the organization of Activity 3. Activity 2 could be the responsibility of each of the actors (partners, NGOs, the MOE) working toward the promotion of girls' education. Each organization in the ministry (national and regional centers, other organizations) and each national or international institution working for girls' education will need to ensure monitoring of its own activities by updating the standard form drawn up by the CPS. An ad hoc team from the CPS should be particularly responsible for monitoring PRODEC programs.

The team responsible for monitoring girls' education should be small—three people at the most—chosen preferably from those responsible for PRODEC monitoring. The team members should be accustomed to dealing with donors, technical and financial partners, and ministry organizations. They will also need to prove that they are capable of synthesis and analysis. Lastly, their availability is essential for effective monitoring.

Products: A succinct annual report will be published by the partners. It will complete a synthesis of the quarterly internal reports from the Special Commission and will cover results and impact, showing the evolution of basic indicators and the additional cost allocated to girls' education.

8. CONSTRAINTS

The time allotted for this study was two weeks concomitant with an analysis of the current simulation model. The period reserved for the study coincided with the holiday of some educational professionals from the technical and financial partners, and so the team was unable to meet with them. Recent statistics are unavailable, so we must provide indicators through 1998 as accurately as we can ourselves. Some data remain unavailable for 1999 through 2002. Other data from reports at the start of the school year, and thus not consolidated, will be considered as proxies, although the team was unable to obtain all these data. It is, however, preferable to have unconsolidated data than none at all, and this CPS strategy is commendable.

9. RECOMMENDATIONS

At the Institutional Level

- Girls' education (program and monitoring):
 - Direct education-development programs for affirmative action for girls so that they can truly benefit from the efforts of the technical and financial partners and the MOE;
 - Adapt strategies to the needs and education levels of girls and boys (depending on region and social, economic, and cultural context); and
 - Ensure systemic monitoring (all invested resources) of contributions and efforts to promote girls' education.
- Management of academic statistics:

- Assist the CPS in revising, testing, and finalizing, if need be, the software for managing academic statistical data that was recently installed in the MOE. If this cannot be done before March 2003 (a period that coincides with statistical data collection), develop and deliver the new application in a fourth-generation software (for example, windev), including an interface function with the simulation model.
 - Normalize informal and semiprofessional training to contribute to the Education for All initiative, including academic statistics for the initiative.
- Simulation model:
 - Finish the simulation model by simplifying it by (1) integrating data divided by sex concerning, among other variables, students and instructors, and (2) itemizing inputs for instructor training activities (details in Annex 2 in French);
 - Create a user's manual; and
 - Train ministry personnel who might use the simulation model.

At the School Level

In general, make schools more adapted to the needs and aspirations of their communities and children. Specifically:

- Make the school schedule more flexible and better adapted to the setting.
- Make communities aware of and provide information about the purpose of school and its social and economic advantages for the community.
- Better adapt curricula and pedagogical methods to the purpose of school and learning.
- Consider informal or semiprofessional alternatives to improve school enrollment rates.

ANNEX 1
TERMS OF REFERENCE

TERMS OF REFERENCE

WIDTECH: Terms of Reference for a retrospective study on girls' education in Mali using the EMIS Simulation model

I. BACKGROUND

Mali, like many other countries in Africa, is currently involved in a ten-year Sectoral Investment Program under World Bank leadership with the involvement of all the major donors. The “Programme Décennal de l'Éducation” (PRODEC) identifies major issues, policies, strategies and specific interventions that are expected to contribute to providing quality education in Mali over the next ten years to a great number of children.

According to 1997/1998 figures, the gross primary enrollment rate is 48.9 percent; the enrollment rate for males being 58.1 percent and 39.7 percent for females. As for secondary school, the figures are even lower. Only 12.6 percent of boys and 8.3 percent of girls (percent of gross) are enrolled (World Development Indicators). Mali has established intermediate/specific targets in terms of access, quality and institutional capacity building. For example, it is expected that by 2008, the Gross Access Rate would reach at least 75 percent; 70 percent is the target set for girls' enrollment. The country is anticipating achievement of Universal Primary Education (UPE) by 2015.

Findings from recent studies including a Gender Analysis of the Sectoral Investment Plan (SIP) or (PRODEC) and An Institutional Analysis of the Ministry of Education revealed/identified a series of weaknesses in terms of integration of girls and their needs into the key elements of the sectoral plan. Following are some of the issues raised:

- The staff in charge of implementing girls' education policies and strategies lack knowledge and technical skills required to efficiently conduct different analysis and planning needed in order to assess the status of girls' education and project a diversified investment portfolio to meet UPE by the year 2015.
- Lack of appropriate performance indicators to collect information, monitor and evaluate program achievements (with focus on girls) at all levels, on an annual basis is another missing piece.
- Recommendations made include targeting the strategic areas of the reform; these include, in addition to access, the curriculum, teacher training (pre and in service), didactic/instructional materials, monitoring/evaluation/reporting, institutional capacity strengthening, etc. In order to better ensure the inclusion of girls and their educational needs.

The current low rates of schooling for both boys and girls highlight the need for reinvigorating strategies in order to meet UPE by 2015. The Education Component of USAID Youth Strategic Objective Agreement represents a major contribution to the

implementation of Mali's current Sectoral Investment Program; total amount is \$5 million per year for five years. Specific objectives of the girls' education component were the following: increase access and attendance while improving the quality; and improving female teachers' participation in basic education was also among objectives.

In response to some of the specific issues raised by the PRODEC gender analysis, USAID, in partnership with the MOE's Girls' Education Section, is currently supporting the work of three consultants to develop tools to better integrate gender and reflect girls' and their needs into the curriculum. The team will provide training in "gender and education" and the use of the analytical tools to curriculum writers, those involved in the testing and evaluation of the curriculum and staff of the girls' education section at the central, regional and local level. The training will take place in February 2002. A second part of this activity focuses on a retrospective study on the status of girls' education and recommendations for diverse strategies to meet UPE by 2015 utilizing an education simulation model.

Simulation Model

Mali has committed to achieving UPE by 2015. As such, it is crucial that the government closely assesses students'—girls and boys—current educational status and devise strategies to ensure that all children are in school. Since girls comprise a large part of the population currently out of school, it is important to understand why girls are not in school and find ways to increase their school enrollment and provide the means to help them succeed and advance to higher grades. An important first step to effective policies and programs contributions' to achieving UPE by 2015 is to understand the impact of public sector investments in education over the past decade. A retrospective study of this nature can highlight trends and identify areas of need, which, if addressed, might increase the likelihood of achieving the UPE goals.

The Center for Statistics and Planning (CPS) within the Ministry of Education has used a number of "simulation models", primarily for data collection purposes. The World Bank and UNESCO have provided technical assistance in creating and training CPS staff in the use of these models. Due to a number of complexities in the use and structure of previous models, the CPS and UNESCO have developed a new model. Sections of previous models have been used and built upon to enable a larger collection and analysis of educational data. The model currently in use comprises of educational data at both the national, regional and local levels, and incorporates preschool, formal, non-formal and university levels. Data is further disaggregated by sex. The Director of CPS manages the excel-based model. Training of directors at the 15 Académie (regional) levels is planned once these structures have been established and professionals named to the positions.

In addition to being a data collection tool, the model is intended to serve as a "decentralized" planning tool that can provide prompt responses to decision makers wanting to know the effects and consequences of certain policy changes. Thus far, the model has been utilized in the following instances at different levels of schooling and at the central, regional and local echelons:

- Determine the number of classes needed;
- Determine the number of teachers required;
- Determine and manage the number and amount of scholarships awarded to secondary and higher education students;
- Determine the level of funds required to implement the above measures, the level of available funds and submit a request for funds to international financial and technical agencies (i.e. bilateral agencies).

II. PURPOSE OF WORK

The purpose of this Scope of Work is to obtain the services of an international consultant proficient in the use EMIS education simulation model and its application to supporting girls' education. The consultant will undertake a retrospective study on the status of investments in girls' education in Mali over the past ten years and identify additional factors or inputs to the model to demonstrate how to maximize investment in girls' education in Mali. The consultant will develop a monitoring and evaluation plan to track changes over time in investments and their impact on girls' education, including progress toward achieving the UPE 2015 goal. The consultant will present key findings to interested partners and Ministry of Education staff, and participate in a gender training planned for February 2002.

TASKS

The primary tasks of the consultant are:

- Undertake a retrospective study on the status of girls' education in Mali over the past decade. Recommend strategies the MOE needs to implement in order to meet UPE by 2015.
- Conduct an analysis of secondary data on the status of investments and girls' education indicators in Mali over the last ten years using EMIS/CPS simulation scenario; highlight key questions and concerns related to the findings, and produce alternative funding and impact scenarios;
- Outline the implications of various investment options for meeting UPE by 2015, particularly in terms of girls' education;
- Propose a plan for diversifying factors (inputs) to be included in the model and analysis plans that demonstrate alternative scenarios for improving girls' education (using outcome indicators such as access, retention, promotion and success);
- Develop a monitoring and evaluation plan for the Ministry of Education's Center for Statistics and Planning to use to track changes in investments and outcomes in terms of girls' education and progress made toward meeting the UPE 2015 goal;
- Present findings at the workshop on building capacity to "integrating gender into the curriculum to improve the quality of education";
- Present the key findings and the monitoring and evaluation plan to key decision makers in USAID and at different levels of the ME, donors and PVO/NGOs as identified by USAID/Mali.

IV. METHODOLOGY

In order to achieve these tasks, the consultant will need to review the existing data set and simulation model before traveling to Mali, and talk with key informants knowledgeable about alternative models and their comparative advantages. In Mali, the consultant will report to the Lead Gender Trainer and Team Leader, and will meet and coordinate with persons in the Ministry of Education who are in charge of the current simulation model and data sets. The simulation consultant's tasks are complementary to that of the team currently working on integrating gender into the curriculum.

DELIVERABLES

Before leaving Mali the consultant will debrief with key Mission Personnel and submit to USAID/MALI a draft trip report that will include:

- Report on the simulation model: its current use, client, structure and future utility for diversifying investments in girls education;
- Synthesis of the session on the simulation model delivered at the training workshop;
- Monitoring and evaluation plan to track changes in investments and correlate them to indicators of girls' education and Mali's progress in meeting the UPE 2015 goal.

This report will be finalized based on feedback from the Mission and WIDTECH submitted as a final report to the Mission and WIDTECH within ten working days of receiving their feedback.

RELATIONSHIPS AND RESPONSIBILITIES

The consultant shall work in close collaboration with the WIDTECH Team Leader, two national consultants and the Ministry of Education's Center for Statistics and Planning. The Girls' Education Section will take the lead for organizing, coordinating and facilitating meetings and work session with partners at the various levels. The activity manager for this activity is Mme Traoré Korotoumou Konfé, USAID/Mali.

VII. ESTIMATED LEVEL OF EFFORT

It is anticipated that the Simulation Consultant will require up to 18 days to complete this assignment and will travel to Mali once. The Simulation Consultant will have 3 days for preparation, 4 travel days, 8 days in country and 3 days to finalize documents.

VIII. PERIOD OF PERFORMANCE

It is anticipated that this work will begin on or about February 6, 2002. Travel on or about February 9-20, 2002. The Consultant will submit the draft report by February 25, 2002 to WIDTECH and USAID/Mali, and submit a final report that integrates suggested changes by March 15, 2002.

IX. LANGUAGE REQUIREMENT

Consultant shall be proficient in French. All deliverables shall be submitted in French and English. The workshop will be conducted in French and all documents will be prepared in French to ensure the effective involvement and ownership of the Ministry of Education. The final version of key documents will be translated by WIDTECH into English.

DOCUMENTATION TO BE MADE AVAILABLE BY USAID/MALI AND THE WIDTECH TEAM

- EMIS Simulation model currently used by the Ministry of Education
- Report on the creation, management and use of simulation model (written by national consultants on team)
- Les Axes prioritaires du PRODEC.
- La Loi d'Orientation
- Programme d'Investissement du Secteur de l'Education.
- Le rapport d'étude de l'Analyse Genre du PRODEC.
- Le rapport de l'étude intitulée “ Analyse Institutionnelle du Ministère de l'Education 2001”.
- Country Strategic Plan 1998-2002
- Youth Strategic Objective framework
- The draft Country Strategic Plan for 2010

ANNEX 2

**ELEMENTS DU MODELE DE SIMULATION ET SYNTHESE DES
SUGGESTIONS (EN BLEU ET SOULIGNE)**

ELEMENTS DU MODELE DE SIMULATION ET SYNTHESE DES SUGGESTIONS (EN BLEU ET SOULIGNE)

Pays : MALI

Ressources nationales anticipées

PIB (en millions)	
Taux de croissance annuel du PIB (percent)	Femme-Homme
Population totale (en milliers)	
Accroissement annuel de la population globale	Femme-Homme
PIB/Tête	
Ressources internes en percent du PIB	
Ressources internes (en millions)	
% Education courantes par rapport aux ressources	
Total Ressources (hors ressources pour capital) pour le secteur (en millions)	

Besoins de financement public : Dépenses courantes

Préscolaire	
Effectif enfants dans le préscolaire public	Filles-Garçons
Coût unitaire (Fcfa)	Filles-Garçons
Coût total pré-scolaire public (en millions)	
Effectif enfants dans le pré-scolaire privé	Filles-Garçons
Subvention par élève (Fcfa)	Filles-Garçons
Coût total du préscolaire privé (en millions)	
Total dépenses courantes du préscolaire (en millions)	

Premier cycle

Population scolarisable 7-12 ans pour les garçons et 6-11 ans pour les filles	Filles-Garçons
Accroissement annuel de la population scolarisable	Filles-Garçons
Taux d'accès en 1A	Filles-Garçons
Année cible	
Taux de survie en primaire	Filles-Garçons
% de redoublants dans le primaire	Filles-Garçons
Année cible	
% de cas d'abandons dans le primaire	Filles-Garçons
Taux d'accès en 6A	Filles-Garçons
Taux brut de scolarisation	Filles-Garçons
Elèves du primaire	Filles-Garçons
Nombre d'élèves dans l'enseignement privé laïc et Medersa	Filles-Garçons

% d'élèves dans l'enseignement privé	Filles-Garçons
Nombre d'élèves dans les écoles communautaires	Filles-Garçons
% d'élèves dans les écoles communautaires	Filles-Garçons
Année cible	
Elèves du primaire public	Filles-Garçons
Nombre d'élèves par enseignant dans le public	Filles-Garçons
Nombre d'enseignants dans le public&catho	
Taux de déperdition annuel	Femme-Homme
Effectif enseignants cat1	Femme-Homme
Effectif enseignants cat2	Femme-Homme
Effectifs enseignants payés sur ressources propres	Femme-Homme
Nombre total d'enseignants dans le public	Femme-Homme
Politique de recrutement d'enseignants de cat1	Femme-Homme
Coût enseignant cat 1 en unité PIB/Tête	
Coût enseignant cat 2 en unité PIB/Tête	
Année cible	
Nombre d'enseignants payés par l'Etat à 25KFcfaX9 (25KFcfaX12) dans école comm.	Femme-Homme
% d'enseignants subventionné dans les écoles communautaires	Femme-Homme
Année cible	
Nombre total d'enseignants dans les écoles communautaires	Femme-Homme
Nombre d'élèves par enseignant dans les écoles communautaires	
Coûts enseignants des écoles communautaires (en millions)	
Coût enseignant en unité PIB/Tête des écoles communautaires	
Coût moyen enseignant payé par l'Etat en unité PIB/Tête	
Coût moyen annuel d'un enseignant payé par l'Etat (yc communautaire)(Fcfa)	
Coûts enseignants payés par l'Etat (yc dans les écoles communautaires) (en millions)	
Autres dépenses courantes en personnel administratif (en millions)	
Autres dépenses courantes de fonctionnement (en millions)	
Autres dépenses courantes en pers. administratif/Coût enseignant (%)	
Autres dépenses courantes de fonctionnement /Coût enseignant (%)	
Autres dépenses courantes totales pour le public/Coût enseignant (%)	
Autres dépenses courantes totales (en millions)	
Total dépenses public (en millions)	
Coût unitaire (% du PIB par tête)	
Subvention pour l'enseignement privé (en millions)	
Subvention par élève du privé (Fcfa)	Filles-Garçons
Subvention pour autre système (en millions)	
Subvention par élève autre système (Fcfa)	
Total dépenses courantes pour le premier cycle (en millions)	

Second cycle du fondamental

Taux de transition effectif (6A-7A)	Filles-Garçons
Nouveaux entrants en 7A	Filles-Garçons
Population 13 ans	Filles-Garçons
Population 13 - 15 ans	Filles-Garçons
Accroissement annuel de la population scolarisable	Filles-Garçons
Taux de survie dans le Second cycle du fondamental	Filles-Garçons
% de redoublant dans le Second cycle du fondamental	Filles-Garçons
Année cible (survie et redoublement)	Filles-Garçons
% de déperdition	Filles-Garçons
Taux d'accès en 7A Second cycle du fondamental	Filles-Garçons
Taux d'accès en dernière 9A Second cycle du fondamental	Filles-Garçons
Taux brut de scolarisation dans le Second cycle du fondamental	Filles-Garçons
Effectif total d'élèves dans le Second cycle du fondamental	Filles-Garçons
Nombre d'élèves dans l'enseignement privé	Filles-Garçons
% d'élèves dans l'enseignement privé	Filles-Garçons
Nombre d'élèves dans l'enseignement public	Filles-Garçons
Nombre d'élèves par enseignant	
Nombre de cours dans le public	
Nombre d'élèves par cours	Filles-Garçons
Nombre d'heures hebdomadaires élève	
Service effectif enseignant	Femme-Homme
Nombre d'enseignants	Femme-Homme
Coût enseignant en unité PIB/Tête	
Coût annuel enseignant (Fcfa)	
Coûts enseignants (en millions)	
Autres dépenses courantes en personnel administratif (en millions)	
Autres dépenses courantes de fonctionnement (en millions)	
Autres dépenses courantes en pers. administratif/Coût enseignant (%)	
Autres dépenses courantes de fonctionnement /Coût enseignant (%)	
Autres dépenses courantes/Coût enseignant (%)	
Autres dépenses courantes (en millions)	
Subvention pour le privé (en millions)	
Subvention par élève du privé (Fcfa)	Filles-Garçons
Total dépenses courantes de l'Etat pour le second cycle (en millions)	

Secondaire

Taux de transition effectif	Filles-Garçons
Nouveaux entrants au secondaire	Filles-Garçons
Population 16 ans	Filles-Garçons

Population 16 - 18 ans	Filles-Garçons
Accroissement annuel de la population scolarisable	Filles-Garçons
Taux de survie au lycée	Filles-Garçons
% de redoublants dans le secondaire2	Filles-Garçons
Année cible (survie et redoublement)	Filles-Garçons
Taux d'accès en secondaire2	Filles-Garçons
Taux d'accès en dernière année du secondaire2	Filles-Garçons
Taux brut de scolarisation dans le secondaire2	Filles-Garçons
Effectif total d'élèves dans le secondaire	Filles-Garçons
Nombre d'élèves dans l'enseignement privé	Filles-Garçons
% d'élèves dans l'enseignement privé	Filles-Garçons
Nombre d'élèves dans l'enseignement public	Filles-Garçons
Nombre d'élèves par enseignant dans le public	
Nombre de cours	
Nombre d'élèves par cours	Filles-Garçons
Nombre d'heures hebdomadaires élève	
Service effectif enseignant	Femme-Homme
Nombre d'enseignants	Femme-Homme
Coût enseignant en unité PIB/Tête	
Coût annuel enseignant (Fcfa)	
Coûts enseignants (en millions)	
Autres dépenses courantes en personnel administratif (en millions)	
Autres dépenses courantes de fonctionnement (en millions)	
Autres dépenses courantes en pers. administratif/Coût enseignant (%)	
Autres dépenses courantes de fonctionnement /Coût enseignant (%)	
Autres dépenses courantes/Coût enseignant (%)	
Autres dépenses courantes (en millions)	
Subvention pour le privé (en millions)	Filles-Garçons
Subvention par élève du privé (Fcfa)	
Total dépenses courantes de l'Etat pour le secondaire (millions)	

Enseignement Technique et professionnel

Effectif d'élèves de l'enseignement Technique classique Tertiaire public	Filles-Garçons
Effectif d'enseignants fonctionnaires	Femme-Homme
Effectif d'enseignants contractuels	Femme-Homme
Effectif total d'enseignants	Femme-Homme
Taux de déperdition annuel	Femme-Homme
Politique de recrutement d'enseignants fonctionnaires	
Nombre d'élèves par enseignant	
Coût enseignant fonctionnaire en unité PIB/Tête	
Coût enseignant contractuel en unité PIB/Tête	

Coût moyen d'un enseignant en unité PIB/Tête	
Masse salariale enseignant (en millions)	
Autres dépenses courantes en personnel administratif (en millions)	
Autres dépenses courantes de fonctionnement (en millions)	
Autres dépenses courantes en pers. administratif/Coût enseignant (%)	
Autres dépenses courantes de fonctionnement /Coût enseignant (%)	
Autres dépenses courantes/Coût enseignant (%)	
Autres dépenses courantes (en millions)	
Nombre d'élèves de l'Etat dans les établissements privés	Filles-Garçons
% par rapport au public	Filles-Garçons
Subvention totale	
Subvention par élève	Filles-Garçons
Total dépenses courantes de l'Etat pour l'enseignement technique et professionnel (en millions)	

Ecoles normales

Effectifs d'étudiants	Filles-Garçons
Coût par étudiant	Filles-Garçons
Personnel d'encadrement CAP-AE	Femme-Homme
Nouveaux entrants	Filles-Garçons
Population 18-22 avec le IEF	Filles-Garçons
Population 22-26 avec le BAC	Filles-Garçons
Taux de survie	Filles-Garçons
Redoublants	Filles-Garçons
Nombre d'enseignants	Femme-Homme
Total dépenses courantes enseignement normale (millions)	

Enseignement Supérieur

Etudiants du public	Filles-Garçons
Coût par étudiant du public hors aides sociales (Fcfa)	
Accroissement annuel du coût par étudiant	
Coût hors dépenses sociales (en millions)	
Dépenses sociales moyennes par étudiant (Fcfa)	
Accroissement annuel des dépenses sociales par étudiant	
Total dépenses sociales (en millions)	
Total dépenses hors études à l'étranger (en millions)	
Coût des études à l'étranger (en millions)	
Accroissement annuel du coût des études à l'étranger	
Total dépenses courantes du supérieur (en millions)	

Récapitulatif des dépenses courantes par niveau (en millions de Fcfa)

Enseignement préscolaire
 Enseignement primaire
 Enseignement secondaire1 et 2
 Enseignement technique et professionnel
 Enseignement supérieur
 Enseignement normale
 Dépenses courantes du secteur

Construction de salles de classe**Besoins pour dépenses en capital dans le primaire**

Coût par salle (en milliers)
 Nombre d'enseignants/salle de classe
 Nombre de salles Filles-Garçons
 Nouvelles constructions / an
 Bureau Directeur
 Logement Gardien
 latrines Filles-Garçons
 Atelier
 Aire de jeu
 Point d'eau
 Magasin
 Equipement
 Education non formelle
 Besoins en capital /an (en millions)

Besoins pour dépenses en capital dans le second cycle

Coût par salle (en milliers)
 Nombre de divisions / salle
 Nombre de salles
 Latrines
 Nouvelles constructions / an
 Besoins en capital /an (en millions)

Besoins pour dépenses en capital dans le secondaire

Coût par salle (en milliers)
 Nombre de divisions / salle
 Nombre de salles

Latrines

Nouvelles constructions / an

Besoins en capital /an (en millions)

Besoins pour dépenses en capital dans les écoles normales

Coût par salle (en milliers)

Nombre de divisions / salle

Nombre de salles

Latrines

Nouvelles constructions / an

Besoins en capital /an (en millions)

Récapitulatif

Besoins et ressources totaux pour le secteur (en millions de Fcfa)

Dépenses courantes

Dépenses en capital / an (construction de salles de classe)

Dépenses totales

Ressources nationales

Ecart : Ressources - Dépenses

(en millions de Fcfa)

Ecart sur les dépenses courantes

Ecart sur les dépenses en capital / an

Ecart total

Données de base (sur fond vert)

Hypothèses (sur fond jaune)

Année cible différente de l'année cible globale (sur fond bleu)

Taux de change \$

Dépenses en capital cumulé

ANNEX 3

**PRESENTATION DE L'ETUDE RETROSPECTIVE EVOLUTION DE
L'EDUCATION DES FILLES AU MALI**

PRESENTATION DE L'ETUDE RETROSPECTIVE EVOLUTION DE L'EDUCATION DES FILLES AU MALI

Enseignement Fondamental 1er cycle.

L'éducation des filles est depuis la Conférence de Jomtien une des stratégies prioritaires au niveau mondial. En effet le taux de scolarisation des filles est assez faible dans tous les pays du monde en voie de développement alors que la scolarisation ou l'éducation des filles et des femmes est un facteur déterminant dans le développement. Le Mali n'est pas en marge de ce processus qui contribuerait à l'éducation pour tous ou l'éducation primaire universelle. Le présent document est un élément de l'étude rétrospective de la situation de l'éducation des filles au Mali. Nous analyserons donc quelques indicateurs de base du système éducatif.

Commençons par les taux de scolarisation.

Définition

On appelle taux brut de scolarisation le ratio ou le quotient de la population scolaire, c'est à dire à l'école, par la population scolarisable, c'est à dire en âge d'aller à l'école ou encore ayant en l'occurrence entre 7 et 12 ans. Quant au taux net de scolarisation, c'est le quotient de la population scolaire entre 7 et 12 ans par la population scolarisable.

TBS : Taux brut de scolarisation = Population scolarise/Population scolarisable (7-12ans)

TBS : Taux net de scolarisation = Population scolarise (7-12ans)/Population scolarisable (7-12ans)

Scolarisation des Filles (Dix Dernières Années)

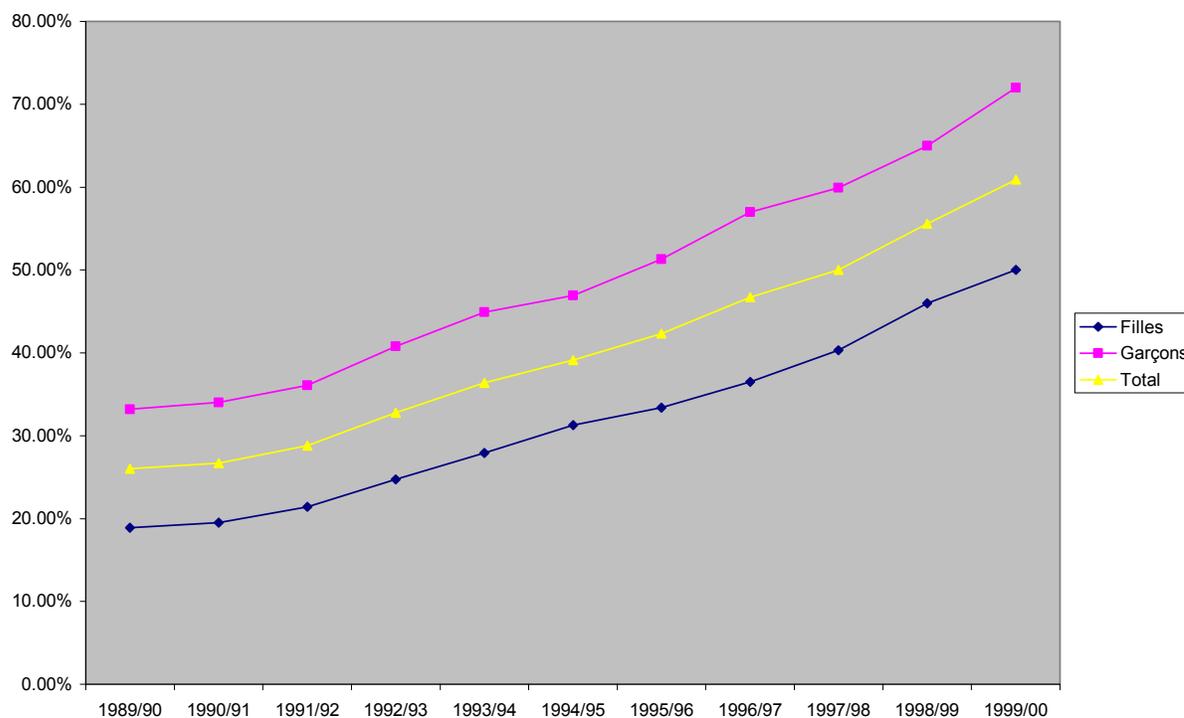
Année scolaire	Taux brut de scolarisation			Taux net (7-12 ans) de scolarisation		
	filles	garçons	total	filles	garçons	total
1989/90	18.90%	33.20%	26%	15.40%	25.80%	20.70%
1990/91	19.50%	34%	26.70%	16.20%	27.30%	21.80%
1991/92	21.40%	36.10%	28.80%	17.30%	28.60%	23.00%
1992/93	24.70%	40.80%	32.80%	19.20%	30.20%	24.70%
1993/94	27.90%	44.90%	36.40%	21.90%	34.70%	28.30%
1994/95	31.30%	46.90%	39.10%	28.40%	39.59%	33.90%
1995/96	33.40%	51.30%	42.30%	26.20%	39.70%	32.90%
1996/97	36.50%	57%	46.70%	29.70%	46.60%	38.20%
1997/98	40.30%	59.90%	50%	32.60%	47.10%	39.90%
1998/99	46%	65%	55.60%	36.20%	50.60%	43.50%
1999/00	50%	72%	60.89%			

Ministère de l'Education CPS

Observations 1. En analysant le tableau ci-dessus et le graphe correspondant ci-après, on peut remarquer qu'en dix ans le taux de scolarisation des filles a plus que doublé, en passant de 19% en 1990 à 50% en 2000. Ceci est dû principalement à la démocratisation de

l'éducation, à l'engouement pour la scolarisation pour tous, et l'éducation des filles après la Conférence de Jomtien. Les principaux partenaires dans ces efforts pour la scolarisation des filles sont le Gouvernement malien par l'intermédiaire du Ministère de l'Education (ME), l'USAID à travers le financement de nombreux PVOs travaillant sur le terrain, et par un dialogue avec les décideurs du système éducatif pour orienter les politiques éducatives, et enfin l'UNICEF)

Taux bruts de scolarisation au Mali, 1er cycle EF



Observations 2. Le système en général a-t-il progressé à la même allure ou seulement dans le cas des filles ? Non, il a plus progressé chez les garçons, car l'écart se creuse entre le TBS filles et le TBS garçons comme le montre le tableau suivant; il est passé de 14 points à 22 points.

Années scolaires	Taux brut de scolarisation		
	filles	garçons	Ecart
1989/90	18.90%	33.20%	14.30
1990/91	19.50%	34%	14.50
1991/92	21.40%	36.10%	14.70
1992/93	24.70%	40.80%	16.10
1993/94	27.90%	44.90%	17.00
1994/95	31.30%	46.90%	15.60
1995/96	33.40%	51.30%	17.90
1996/97	36.50%	57%	20.50
1997/98	40.30%	59.90%	19.60
1998/99	46%	65%	19
1999/00	50%	72%	22.00

Ministère de l'Education CPS

Observations3. Avons-nous eu les mêmes progrès sur toute l'étendue du Pays ? A-t-on atteint les 50% de TBS Filles sur toute l'étendue du Territoire ? Non, Kidal et Mopti restent à un TBS filles de moins de 30% pour l'un et 37% pour l'autre, pendant que Bamako est passé à plus de 100%, comme on peut l'observer sur le tableau qui suit.

Taux bruts de scolarisation par region

Régions	Taux brut en 1997/98			Taux brut en 1999/00		
	Filles	Garçons	Ecart	filles	garçons	Ecart
Kayes	33.20%	54.60%	21.40	45.10%	74.20%	29.10
Koulikoro	42.80%	69%	26.10	53.40%	85%	31.60
Sikasso	34.40%	57.70%	23.30	41.70%	65.20%	23.50
Segou	32.10%	53.50%	21.40	42.60%	64.70%	22.10
Mopti	21.40%	32.20%	10.80	37.10%	54.10%	17.00
Tombouctou	24.20%	33.70%	9.50	39.40%	54.80%	15.40
Gao	30.10%	41.80%	11.70	42.50%	61.50%	19.00
Kidal	20.30%	33%	12.90	26.50%	38.80%	12.30
Bamako	125.00%	153.10%	28.10	107.70%	108.80%	1.10
Ensemble du Mali	40.30%	59.90%	19.60	50%	72%	22.00

Ministère de l'Education CPS

Conclusion: les disparités persistent en genre et par régions, bien que la scolarisation des filles ait progressé !

Qualité de cette scolarisation

Les taux de redoublement ont sensiblement baissé pour les premières années d'enseignement comme l'indique le tableau suivant :

Taux de redoublement au premier cycle EF

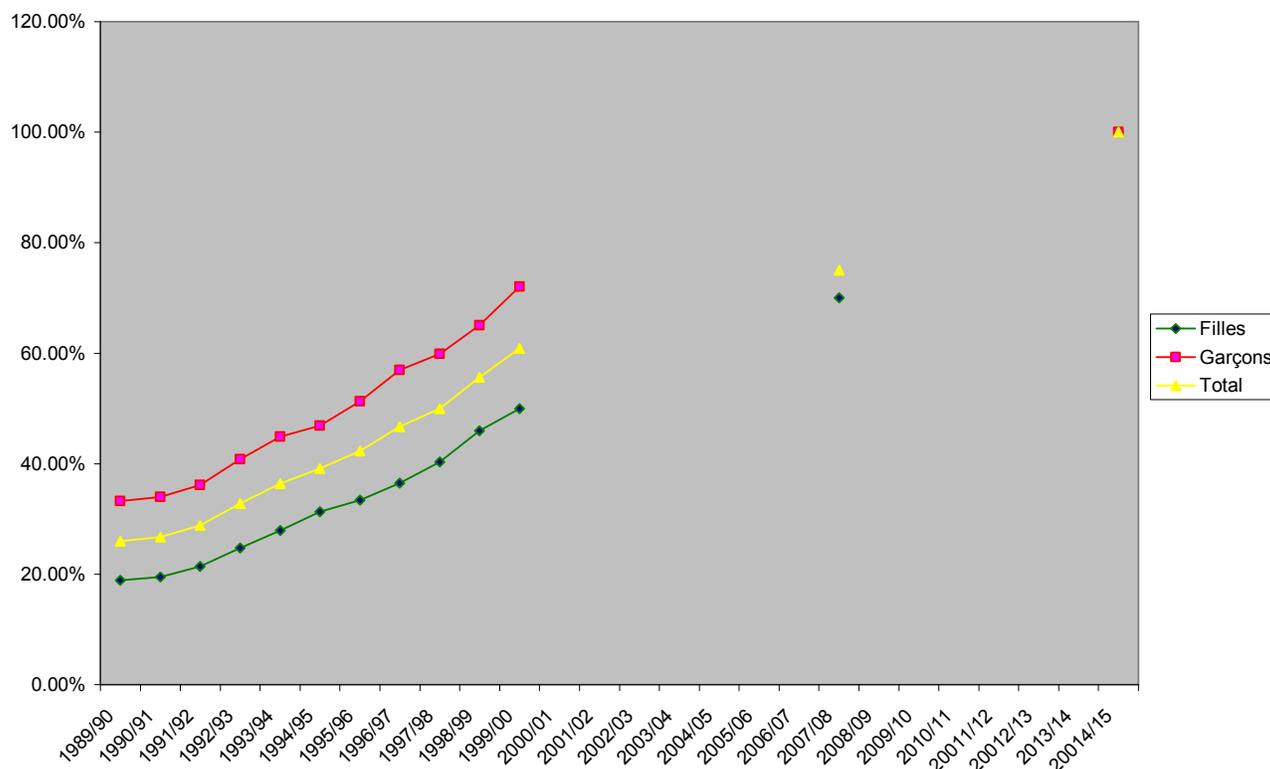
Années scolaires	1e année	2e année	3e année	4e année	5e année	6e année
1990/91	30.4%	30.3%	38.9%	34.3%	35.9%	34.8%
1994/95	18%	16.8%	21.3%	19.2%	20.7%	34.4%
1996/97	13.6%	13.2%	18.4%	21.5%	26.5%	37.4%

Ministère de l'Education CPS

Les taux de redoublement sont sensiblement les mêmes chez les filles et les garçons, cependant les filles abandonnent plus que les garçons en 5e et bien plus en 6e année. Mais en général, ces taux sont encore élevés ; sur la base des taux de redoublement et d'abandon de 96/97, sur 10 élèves entrant en 1ere année, 7 arrivent en 6e année (après 5, 6, ou 7 ans). (Indicateurs du Système Educatif du Mali 1998).

L'Éducation Des Filles D'ici 2015 Projections

Taux brut de scolarisation au premier cycle (+ medersas)



Pour atteindre les objectifs de l'éducation pour tous ou l'éducation primaire universelle fixée à 95%, il faudrait que le rythme de progression soit maintenu. Ceci impliquerait une augmentation encore plus grande de l'accroissement du budget alloué à l'éducation, et à celle des filles, qui progresse moins que l'éducation des garçons. Déjà nous savons qu'il est nécessaire d'avoir plus de ressources pour maintenir le taux de scolarisation constant, par le fait de l'accroissement démographique. Ou trouver ces ressources afin que plus d'enfants, de plus en plus d'enfants, tous les enfants aient la possibilité d'aller à l'école et d'y accomplir tout le premier cycle?

Et si tous les enfants avaient accès à l'école, tous les parents ont-ils alors envie d'envoyer leurs enfants à l'école? En effet la demande d'éducation est aussi un facteur à prendre en compte dans les éléments influents sur les indicateurs du système éducatif.

Les facteurs principaux qui déterminent les taux d'accès et de performance du système éducatif sont :

- les ressources financières pour les différents secteurs de l'éducation à renforcer et les différents programmes de développement et de gestion du système éducatif;
- la croissance démographique, et

- la demande d'éducation des communautés.

Une étude plus approfondie sur le poids des us et coutumes, et sur le coût de l'éducation au Mali nous permettraient de procéder facilement à des simulations ; et nous nous apercevions des implications et conséquences suivantes au niveau du système :

Si les niveaux de ressources restent les mêmes que ces deux dernières années :

- Si le rendement du système reste le même, le taux de scolarisation des filles va diminuer
- Si le rendement du système s'améliore, le taux de scolarisation va rester constant ou augmenter légèrement

Si les niveaux de ressources augmentent en rapport avec l'accroissement démographique :

- Si le rendement du système reste le même, le taux de scolarisation va rester constant
- Si le rendement du système s'améliore, le taux de scolarisation va augmenter

Si les niveaux de ressources augmentent dans les mêmes proportions qu'au cours de ces trois dernières années,

- Si le rendement du système reste le même, le taux de scolarisation va augmenter sans pour autant atteindre les 95% de TBS, car un mauvais rendement fini par induire les effets contraires à ceux recherchés.
- Si le rendement du système s'améliore, le taux de scolarisation va augmenter et atteindre les $(100-x)\%$ avec $x\%$ étant le pourcentage de la population scolarisable qui n'ira pas à l'école compte tenu du besoin indispensable que constituent les enfants en tant que main d'œuvre, ou de la tradition qui les retiendra nécessairement en dehors de l'école.

Remarque : sachant que ce nombre x est différent chez les filles ou chez les garçons, il est évident qu'en 2015 les garçons auraient atteint les 95% si x est inférieur ou égal à 5%. Tandis que les filles ayant un coût d'opportunité beaucoup plus élevé, elles connaîtront une progression plus lente comme c'est déjà le cas.

Conclusion:

Pour que les taux de scolarisation augmentent, mais aussi pour que le taux de scolarisation des filles augmente dans les mêmes proportions, il faut des stratégies innovatrices, porteuses et intégrées. Il faut une synergie des efforts consentis par tous les partenaires du système éducatif et leur collaboration. Il faut pouvoir voir le système éducatif et la communauté - que l'école est sensée servir - comme un ensemble, et donc intervenir aussi bien sur l'offre et sur la demande en éducation. Il faut mettre un accent bien particulier sur l'éducation des filles, sans craindre les disparités positives, car des études ont prouvé que la plupart des initiatives pour améliorer l'éducation des filles profitent aussi bien aux garçons qu'aux filles.

