Association for the Development of Education in Africa

Biennale on Education in Africa
(Libreville, Gabon, March 27-31, 2006)

Effective Schools and Quality Improvement

Parallel Session B-1
Characteristics of Effective Schools

Synthesis Report : Local Studies on the Quality of Primary Education in Four Countries

by Ward Heneveld

with Alice Ndidde, Lina Rajonhson, and Fulgence Swai

Working Document
DRAFT

PLEASE DO NOT DISSEMINATE

DOC B-1.1

• Original Version in English •

This document was prepared by ADEA for its Biennial Meeting (Libreville, Gabon, March 27-31, 2006). The views and opinions expressed in this volume are those of the authors and should not be attributed to ADEA, to its members or affiliated organizations or to any individual acting on behalf of ADEA.

The document is a working document still in the stages of production. It has been prepared to serve as a basis for discussions at the ADEA Biennial Meeting and should not be disseminated for other purposes at this stage.

Association for the Development of Education in Africa (ADEA)
International Institute for Educational Planning
7-9 rue Eugène Delacroix
75116 Paris, France
Tel.: +33(0)1 45 03 77 57
Fax: +33(0)1 45 03 39 65
adea@iiep.unesco.org
web site: www.ADEAnet.org

Contents

Acknowledgements

1. The studies reported on this synthesis report would not have occurred if Development Cooperation Ireland's (DCI) representative in Uganda, Liz Higgins, had not invited Alice Ndidde and me to help the educational leadership in the five Rwenzori districts of western Uganda try to understand why investments were not improving students' learning outcomes. However, the credit for being able to replicate that study in other countries goes to the research team from the Rwenzori region. The Ugandans stayed with us over five months in late 2003 and into 2004 as we together figured out how to work through defining characteristics and indicators to study, collecting and analyzing the data, and reaching conclusions and making recommendations. They know best how many unclear suggestions and wrong turns we made as we created our methodology through "learning by doing." Because of their and Alice's fortitude we had a strikingly successful result from that research, and we created a methodology that we thought other local educators could use. ADEA and the Irish Trust at the World Bank agreed with us and have been generous and helpful in the development and implementation of the other three studies. I am particularly grateful for the support of Joris von Bommel, ex-ADEA, and Aidan Mulkeen at the World Bank. Also, the research teams in Madagascar, Mozambique, and Tanzania would have been smaller if the Madagascar Ministry of National Education (MENRS), the Aga Khan Foundation Mozambique, the Canadian Development Agency, and UNESCO had not helped to finance additional researchers.

2. Each national Ministry of Education assigned a local institution to administer the studies' implementation. We are grateful to the Planning Directorate in MENRS in Madagascar, the National Institute for the Development of Education (INDE) in Mozambique, and the Tanzania Institute of Education (TIE) for all they did to ensure that the new studies were carried out. Similar appreciation goes to the local education authorities in Toamasina, Cabo Delgado, Singida, and the Rwenzori districts. They were generous with personnel and facilities during the research.

3. I was the international consultant for the studies in Madagascar, Mozambique, and Uganda. Alice Ndidde served in Tanzania. She has become a valued friend and colleague. However, we would have not been able to complete this work, nor to make it as formidable as we think it is, if the national consultants had not worked so hard. These competent researchers are Lina Rajohnson in Madagascar, Rafael Bernardo in Mozambique, and Fulgence Swai in Tanzania. I acknowledge with deep gratitude their significant contributions of time and effort to making these studies happen and their excellent mediation as interpreters of thoughts, of language, and of the notes generated by the research teams. The reports that Ms. Rahonhson and Mr. Swai wrote after the teams had finished their analyses seemed like a bonus. Just as importantly, we thank the research-practitioners who did the work. They arrived at the first meeting for a "workshop" and found out they had gotten themselves into much more than that. Their expression of how hard we were working confirmed to me the sincerity and effort they committed to; and the results of the studies confirm their efforts and their competence.

4. In the end, if there are faults in this work, they are mine. I have been seeking for many years to broaden the concept of research on the quality of education so that it can respectfully capture the rich experience of local educators. I believe that the approach we have used does this well. Those who have worked with me have believed enough in the methods we are developing to see the studies through to the end. They are very special colleagues.

Acronyms and abbreviations

BEPC	**Brevet élémentaire du premier cycle**
CCT	**Coordinating Centre Tutor**
CIDA	**Canadian International Development Agency**
CISCO	**Circonscription Scolaire**
CONFEMEN	**Conférence des ministres de l'education des pays ayant le français en partage (Conference of Francophone Ministers of Education)**
DCI	**Development Cooperation Ireland**
Grade IIIA	**A teacher qualification in Tanzania**
INDE	**Instituto Nacional do Desinvolvimento da Educação (Mozambique)**
MENRS	**Ministère de l'Education nationale et de la Recherche scientifique (Madagascar)**
PASEC	**Programme d'analyse du système éducatif des pays de la CONFEMEN**
PLE	**Primary Leaving Examination**
PSLE	**Primary School Leaving Examination**
SACMEQ	**Southern and Eastern Africa Consortium for Monitoring Educational Quality**
TIE	**Tanzania Institute of Education**
ZAP	**Zone administrative et pédagogique**
ZIP	**Zona de Influência Pedagógica**

1. ABSTRACT

5. This paper presents the findings and conclusions of four sub-national studies on the quality of primary education in Sub-Saharan Africa. They were carried out by local educators in the Rwenzori region of Uganda, in Toamasina Province on the east coast of Madagascar, in Cabo Delgado Province in northern Mozambique, and in the Singida region in central Tanzania. In each study 20 local inspectors, pedagogical supervisors, teacher trainers, and heads of primary schools, assisted by two consultants, selected a sample of 30 schools, defined the characteristics of an effective school and the indicators for each characteristic, collected data on visits to each school, and analyzed the data together. All the teams chose the national primary school leaving examination as the main dependent variable with which the school data was compared. The qualitative methodology used simple statistical measures to check relationships among school characteristics. The teams carried out the studies in two two-week workshops before and after visits to the sample schools over a period of four months in 2004/2003 (Uganda) and in late 2005 (the others).

6. This synthesis report summarizes the findings of each of the studies, compares findings and conclusions across the studies, and comments on implications of this work for improving the quality of primary education in Sub-Saharan Africa. The conclusions suggest that a greater focus on teacher-learning processes and how to improve them should drive decisions on which school characteristics to invest in to improve student results. However, the report points out that the priorities among school characteristics are most importantly local issues that local research-practitioners should study, as has been done using the methodology developed during this research.

2. EXECUTIVE SUMMARY

7. This paper presents the findings and conclusions of four sub-national studies on the quality of primary education in Sub-Saharan Africa. They were carried out by local educators in the Rwenzori region of Uganda (2003/4), in Toamasina Province on the east coast of Madagascar, in Cabo Delgado Province in northern Mozambique, and in the Singida region in central Tanzania (all in late 2005). The lessons from these studies build on the conclusions of the 2003 ADEA biennial conference's major theme, "The Quest for Quality." The work was undertaken with three objectives in mind: (1) to establish experience-based practical priorities for improving student learning for the province or region studied; (2) to create a cadre of local educators who understand these priorities and who will use the research results to pursue improvements in student learning in the area's primary schools; and (3) to test and refine a student assessment research methodology that other local educators might also use.

8. The parameters for the research design were developed for and during the study in Uganda. The research team in each locality was made up of 20 local inspectors, pedagogical supervisors, teacher trainers, and heads of primary schools and, in two countries, a few educators from the Ministry of Education. The team selected a sample of 30 schools, defined the characteristics of an effective school and the indicators for each characteristic, collected data on visits to each school, and analyzed the data together. Two consultants, one national and one international, facilitated each team's work, and the national consultant drafted the report of findings, conclusions, and recommendations.

9. Each study was carried out in four phases. In the initial design workshop of two weeks, the teams prepared a definition of pupil outcomes, school factors, behavioral characteristics of each factor, and indicators to look for in the schools that would tell them about each characteristic. After the design workshop, two team members visited each of the 30 sample schools for two days, though during implementation there were some visits that lasted only one day and/or had only one researcher. Then at another two-week workshop the teams summarized and analyzed the data on each characteristic from each school, drew conclusions from the analysis, and identified recommendations to make. In the analysis the researchers used a simple statistical measure of association (Yule's Q) to see if their experiential impressions were supported, and later Pearson chi-square coefficients were calculated and compared with results reached during the workshop. Finally, in the fourth phase the national consultant drafted the team's report and in Madagascar, Tanzania and Uganda he/she finalized it with team members. Also, in these countries the team and the consultants presented a dissemination workshop for other educators and decision-makers.

10. Some general findings are similar across all four studies. Learning levels in language and mathematics are low; schools seem to have textbooks in sufficient numbers for students to be able to benefit from using them in class. Students have the basic tools for learning: chalk, pencils, pens, exercise books, small slates; and teachers have guides and manuals which many of them use regularly. At least half the teachers in all the sample schools had sufficient education and teacher training, including in-service, so that the researchers expected them to teach with more accuracy and methods that engage students than they observed during the studies. Classroom and other infrastructure are not associated with students results in two of the studies, probably because local adaptations of shifting and temporary facilities reduce the impact of overcrowding. And there are well-prescribed management instruments for teachers and students – e.g., schemes of work, school schedules, lesson plans, student records – which are prepared by and generally available from most teachers and school heads. In general, then, these studies have found that existing levels of school inputs, though still not fully adequate, could influence students' learning more than they are doing at present.

11. The Rwenzori (Uganda) found some positive conditions in the sample schools. The majority of the teachers were qualified, either grade III or V; there were sufficient textbooks in the schools; classrooms, especially in upper primary were not crowded; and school visits were quite

frequent. The study's priority learning-related school characteristics for the analysis of the data are: a head teacher who supervises teachers' preparation and coverage of the curriculum and the pupils' participation in the classroom; teachers who are prepared for class, regularly assess pupil work, and emphasize the use of instructional materials (especially textbooks) and the teaching of reading and writing; and high pupil participation through regular attendance, homework, and work that is regularly assessed. The study found that the availability of classrooms, teacher housing close to the school, and external supervision do not differentiate high-performing schools from low-performing ones. However, the research team believes that if supervisors focused on the Head Teachers' supervision and monitoring of teachers supervision would have an impact on pupil learning. Although school-community relationships were not explicitly studied, the field visits and analyses convinced the Research Team that this school characteristic also deserves attention in the future. The study's recommendations centered on strengthening the Head Teachers' capacity to lead teachers to improve their teaching in the areas of teaching and learning that the study found significant.

12. The Toamasina (Madagascar) study found many positive conditions in the province's primary schools. Textbooks are available in the schools and regularly used with students. Students have sufficient workbooks, pens, pencils; and teachers have blackboards and chalk and access to maps, posters and teachers' guides and manuals. There has been adequate in-service training to expect its results to be seen in how teachers teach. And although the schools' buildings are not adequate to the number of students, the space problems are being resolved well enough locally that the study did not find this to be a priority concern for the province. The study did find that schools with teachers' who plan for teaching, who put into practice what they have learned (particularly in in-service courses), and who correct and remediate students' work regularly tend to have better results on the school leaving examinations. On the other hand, teaching methods and student participation in class were not associated with examination results or PASEC test results, the study's proxies for learning outcomes. Also, when the community supports the school materially and financially and the head teacher emphasizes teaching and learning in his/her management of the school these characteristics can contribute to the characteristics that directly influence student results. The researchers concluded that teachers' teaching methods ("procédés d'enseignement et d'apprentissage") and supervision by those responsible for the school's academic effectiveness are also priorities, even though the statistical analyses did not support their significance. The study's recommendations offers practical ideas about how to improve local supervision.

13. The study in Cabo Delgado (Mozambique) found positive conditions in the sample schools: the managers of the system are providing oversight and assistance in the schools; the teachers are fairly well qualified; the schools have adequate supplies of teaching materials, including student textbooks and teacher manuals; and communities know and accept the importance of education for their children. The most negative condition found is with respect to the schools' infrastructure. Ten of the 25 schools for which there is data have more than 100 students per classroom. The analysis indicated that students' results did not have a strong positive association with school management characteristics, teachers' formal training, the application of experiences to their teaching, their skill in interesting students in lessons, their punctuality, or their mastery of the curriculum and teaching manuals. The research team concluded that higher mastery by the teacher contributes to lower student results, even though in this study the statistical measure had a negative association with schools' examination results. The only characteristic where the association with outcomes was strongly positive was a school's availability and quality of classrooms. The researchers identified five priority school characteristics to take action on in the province: The school's classrooms and furniture (*infraestrutura*); school management's monitoring and help within the school (*acompanhamento e apoio*); the teachers' master of their subject matter and how to teach it (*domínio dos conteúdos de ensino*); the teachers' success in stimulating students to learn (*conduçâo do aluno para aprednizagem*); and students' active participation in class (*participaçâo activa dos alunos).*

14. The Singida (Tanzania) study found that more than 50% of the teachers were qualified, and that many others are taking an upgrading course. They attend school regularly and use the available textbooks in class. And school-community relationships were stronger than in the other

countries. The study's results also identified a critical path among priority school characteristics. Primary schools in Singida tend to have better results when the head teacher is a role model and he/she monitors and supervises the teaching and learning processes. His or her actions influence the teachers' mastery of content and methodology and their timely assessment and evaluation of learning, leading to motivation of pupils for effective learning. The other priority characteristics they found are adequate school infrastructure, the school administration's communication in the school and community, and its ability to utilize funds so that they reinforce the other priority characteristics. Other characteristics were not found associated with student results either because they were absent in nearly all the schools or they did not show enough variation to be used to differentiate among schools.

15. When compared across the studies, *the school's administration* has not been found to be as significant for a school's learning outcomes as the research teams had hypothesized. The pedagogical oversight that was observed is more perfunctory than the researchers had expected, and there is very little classroom observation of lessons or in-service training initiated at the school level. However, when a school head does pay attention to what the teachers are doing, there is an indication that this may influence their preparations to teach and their evaluation of their students.

16. Each of the research designs defined carefully the characteristics and indicators of *effective teachers and their teaching methods*. However, in three of the four studies the data did not suggest any significant differences in teaching performance between teachers who had been trained and those with less education and no or little teacher training. All the research teams concluded that the lack of an association between the way teachers teach and student outcomes is probably due to the fact that they observed very little variation in teaching methods in the sample schools: teachers talk; students are engaged, but passively; and textbooks are available but poorly utilized. The studies' results do suggest, however, that teachers' preparations for teaching and their regular evaluation of students contribute to how well students do on the school leaving examinations. Interestingly, none of the research teams included language of instruction in the research designs as one of the characteristics to be studied for its influence on teaching and learning. When the consultants asked them why, they explained that this is a given which, locally, most local educators feel powerless about and adapt to. This low priority for language use in the classroom is contrary to evidence and concerns at the international level.

17. Compared with ten years ago, these studies found that *learning materials*, especially textbooks, are available in schools. However, the classroom observations showed that when textbooks are used in class, they are used very formalistically. The studies also concluded that *the physical infrastructure* at the schools studied is inadequate to house all the students comfortably in traditional classrooms. The two countries that have the most overcrowding, Mozambique and Tanzania, found classroom availability to be a significant characteristic, but the data on the less-crowded schools in Madagascar and Uganda did not support this conclusion. These different conclusions suggest that there may be a threshold of crowdedness beyond which students' results are influenced, but this research does not five an indication of what that threshold might be. The three studies that looked explicitly at *external supervision* of the schools found that it is not associated with whether the students do well on school leaving examinations, despite supervision visits being as frequent as resources probably allow. Still, despite a weak association between this factor and student outcomes, the Madagascar and Uganda studies retained it as a priority issue and have made recommendations to strengthen local supervision. The studies in Madagascar and Uganda found that *community involvement* is significantly related to pupils' results and that this involvement is reflected in larger financial contributions than in the other two countries. It may be that an unexplored factor that can influence student achievement is the general community's collective expectations for its children's education when economic opportunities are greater, as they probably are in Toamasina and Rwenzori when compared with Cabo Delgado and Singida.

18. In conclusion, what implications does this work have for other settings? First, other places may find the four studies' conclusions with respect to key characteristics helpful, but local educators elsewhere should themselves work out their own priorities based on local evidence. Second,

the experience reported on here adds a condition for strategies that can improve the quality of primary education that was not in the conclusions of the last ADEA conference: Strategies for improving the quality of primary education need to recognize the potential understanding and insight that comes from local experience. The four research teams' efforts have demonstrated that tapping local experience is possible in a short time with careful thought and hard work. Finally, those of us who participated in this research believe that the national reports and this synthesis paper provide evidence that there is untapped potential and an eagerness among local educators to use objective information to provoke reflection on what their experience may tell them. This requires, though, that governments take the time to elicit, facilitate, and respect these experienced local educators' potential to gather, analyze, and reflect on information as they decide what to do to make sure students have the knowledge and skills offered by African primary schools.

3. INTRODUCTION

19. This paper presents the findings and conclusions of four sub-national studies on the quality of primary education in Sub-Saharan Africa. They were carried out by local educators in the Rwenzori region of Uganda, in Toamasina Province on the east coast of Madagascar, in Cabo Delgado Province in northern Mozambique, and in the Singida region in central Tanzania. The lessons from these studies build on the conclusions of the last ADEA biennial conference. The major theme of the ADEA Biennial Meeting in December, 2003, was "The Quest for Quality." The conference sought to further the progress towards Education For All in Africa which, thirteen years after the Jomtien declaration, had ensured that over 95% of the children in Sub-Saharan Africa attend primary school, at least for some time. The conference recognized that "of the children that enroll in grade 1, less than two-thirds reach the final grade and of these only about half can demonstrate that they master the expected basic skills and knowledge" (Verspoor, "Summary", p. 4). The challenge had become, and remains, to achieve learning levels, especially in basic skills, for all the children, keeping them in school or other learning programs until they do so. With this challenge in mind for the 2003 conference, an ADEA task force on education quality produced 22 detailed case studies, 8 papers by working groups, and 33 background papers for the 2003 conference. "The way forward" from these documents and the discussions at the ADEA meeting suggested five important conditions that are required for effective action to improve the quality of primary education in Sub-Saharan Africa. They include:

- *A political commitment to act* that is reflected in resource allocations, local political discourse, communication, and broad participation;
- *Selecting and sequencing priorities* ("answering the question (of) where to start and what to do later");
- *Capacity building* focused at the school and sub-national ("meso") levels;
- *Effective public-private partnerships* within countries in co-operation with regional and international institutions;
- *Learning from experience* that reinforces flexibility in delivery, a focus on learning, sustained effort over time, and implementing strategies based on evidence.

20. These five conditions call for adaptations to current strategies within countries if students learning goals are to be achieved. Until recently, almost all countries in Sub-Saharan Africa and the agencies that assist them have invested in fairly uniform national educational reform programs. For these reforms the Government establishes goals for enrollment, curriculum design, infrastructure development, and the provision of learning materials. It establishes national policies and programs to achieve those goals, and national budgets and donor financing support program implementation. Throughout the nineties and into the new millennium these policies and programs have produced significant increases in student enrollments by eliminating school fees, running campaigns to get children into school, and offering better educational environments. National educational reforms have enriched the school environment by revising national curricula, producing textbooks and materials to support the curricula, and making sure that the books get to the schools and that teachers are orientated to use them. There have also been extensive school building programs, and communities have pitched in to see that their children have a place to learn. None of these national efforts have, of course, solved all of the design and supply problems in any system, especially since population growth keeps increasing the demand for places in school. But significant progress has been made in many countries, and still learning levels remain low. For example, throughout the nineties the Ugandan Government and donors had been investing steadily in the five Rwenzori districts, but after 2000 student learning outcomes were no better than before the investments. The Ministry of Education and Sports and one of the donors, Development Cooperation Ireland (DCI), wanted to have a better understanding of what the schools in the region needed before making further investments. Their concern led to the first study reported on here.

21. One of the central realizations about the quality of education that has remained constant over the years is that improvements in primary education have to respond to local conditions within and around each school. An early summary of World Bank projects (Verspoor, 1989) concluded that the more the decisions about a project were made within the school the more successful the project had been. A later book by one of the same authors explained this as follows: "The impact of enhanced inputs ultimately depends on how well schools use the available resources" (Lockheed, Verspoor, and Associates, 1991: p. 41). By the time of the 2003 ADEA conference, this commitment to local decision-making as a requirement for improving quality had become an accepted condition for improving quality. The acceptance of this shift in viewpoint has been seen in the adoption by many countries of decentralized educational management systems. In Africa countries have moved in this direction, and all the countries that undertook the studies reported on here have some degree of decentralized financing and planning. Government sponsorship of school improvement grant programs and of community schools also provide examples that governments recognize that local decision-making is necessary and appropriate. Examples of these changes in approach were reported on at the last ADEA conference.

22. However, experimentation to improve local analytic and evaluation capacities has not accompanied the development of capacities to improve quality through decentralization and school-level grants. In Sub-Saharan Africa the capacity for assessment of learning outcomes and school characteristics that influence them has been developed at the national level through the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) in Anglophone Africa (see Postlethwaite, 2004: pp. 55-62) and the Programme d'analyse du systéme éducatif des pays de la CONFEMEN (PASEC) in francophone Africa. The studies done by these two organizations in more than 30 countries have developed skills, experience, and broader awareness at the national level of what students are learning and what can be done at the policy level to improve their learning outcomes. However, until the studies reported on here, there has been little effort to adapt the methodologies of sophisticated educational research to the skills and needs of local educators. As a result, local analytic capacities have lagged behind the authority and responsibility for decision-making that has been devolving to local levels. There has been a need for an approach to data collection and analysis that forces newly responsible local decision-makers to reflect on the objective reality of their schools before allocating resources for improving learning outcomes within national policy guidelines

23. The studies that are reported on in this synthesis paper, then, have had three objectives:

- To establish a set of experience-based practical priorities for improving student learning in the province or region studied;
- To create a cadre of local educators who understand these priorities and who will use the research results to pursue improvements in student learning in the area's primary schools;
- To test and refine a student assessment research methodology that other local educators can use to provoke reflection and to inform decisions on how to improve the quality of their primary schools.

In each study the research team sought to identify priority characteristics of schools which, if improved, could be expected to improve school leavers' results in their area. Each team used a methodology that evolved during the first study in Uganda in 2003/2004 and that the others adapted it as they went along. Chapter 4 describes the methodology that each team used. The findings and conclusions of each study are summarized in Chapter 5. Chapter 6 presents comparisons across the localities for what the research teams concluded with respect to seven school factors: The school administration, teachers, learning materials, a school's infrastructure, external monitoring and supervision, and community involvement and support. The paper concludes in Chapter 7 with general observations that may be applicable beyond what these educators have concluded about their schools. The synthesis report that follows shares the results of the first objective and describes the research methodology that has been used. In the meantime, the local educators who were involved are following up in their own settings as authority, time, and resources allow.

4. THE METHODOLOGY

4.1. Parameters of the Design

24. The parameters for the research design were developed for and during the study in Uganda. The research team that was formed in each locality was made up of 20 local educators from an administrative region with 500 to 1000 primary schools. Within this area the team selected a sample of 30 schools, defined the characteristics of an effective school and the indicators for each characteristic, collected data on visits to each school, and analyzed the data together. Two consultants, one national and one international, facilitated the process, and the national consultant drafted the report of findings, conclusions, and recommendations. In Madagascar, Tanzania, and Uganda the draft report was finalized in consultation with the full team, and a dissemination workshop with other educators was held in the region or province that had been studied. This chapter describes each of these parameters of the design, noting variations that occurred in each of the self-standing studies.

4.2. The Research Team

25. A team of local educators was invited to participate on the research team in each of the three new localities that undertook a study. As in the initial study in Uganda, twenty people started out on each team, half of them sponsored by ADEA and the others by local sources. In Madagascar the sponsoring Ministry of National Education and Scientific Research (MENRS) provided funding; In Mozambique the Aga Khan Foundation Mozambique provided funding and local logistical support; and in Tanzania UNESCO and CIDA assisted ten of the team members. Team members on all four teams were inspectors, pedagogical supervisors, teacher trainers, and heads of primary schools. The breakdown of each team by position is presented in Appendix 8.1. Among these team members, five of the Madagascar participants were from the national level (including the only experienced researcher in the group, the national technical coordinator for the SACMEQ studies). In Tanzania two of the team members were curriculum development specialists from the Tanzania Institute of Education (TIE). Except for the one research specialist in Madagascar, none of the participants had previous experience with educational research.

26. The facilitators for each group were national consultants chosen by the participating government agency. These consultants were Lina Rajonhson, a Research Officer (Chargée d'études) in MENRS (Madagascar), Rafael Bernardo, a curriculum specialist at the National Institute of Educational Development (INDE), and Fulgence Swai from the Ministry of Education (Tanzania). The two international consultants came with experience from the Uganda study: Ward Heneveld, a retired educator from the World Bank (Madagascar and Mozambique) and Alice Ndidde, a lecturer at Makerere University (Uganda). She was also the national consultant for the Rwenzori study.

4.3. Choice of the Regions to Study and their Sample Schools

27. The regions chosen for the study in each country were at the discretion of the host Government. No formal criteria were applied in their selection. In all cases the regions chosen locally were distant from the capital city, mainly rural and poor, and probably representative of the rest of the country. Madagascar selected Toamasina (Tamatave) Province because the Ministry wanted to take as its sample the 30 schools from that province that are part of the sample for a national assessment study being sponsored by PASEC. It was expected that the qualitative dimensions of this study, done by local educators, would add depth to the PASEC study's quantitative analysis. In Mozambique

Cabo Delgado Province was chosen because of its isolation and needs, and the Aga Khan Coastal Rural Support Program there provided a natural ally for the study. In Tanzania, the Ministry designated the four districts in the Singida region because of its isolation and its poor results on the national school-leaving examination. The five Rwenzori districts in Uganda had been chosen for similar reasons, and Development Cooperation Ireland (DCI) which sponsored the study has been providing assistance to the districts for many years.

28. Each research team and the consultants then selected 30 sample schools to be studied. The first consideration was to differentiate the schools based on their pupils' results, but this proved difficult. In Uganda the team selected fifteen schools with clearly better results than fifteen others in the sample, and the choices were distributed six to each district with a mix of rural and non-rural settings and large and small enrollments. The Madagascar study took the province's 30 schools in the PASEC sample, for which there were already test results and completed questionnaires. The Mozambique team selected six districts of the seventeen in the province and then selected five schools in each district as randomly as possible while taking into account the schools' accessibility. In Tanzania the team selected its thirty schools by separating the schools into those that had done well the last three years and those that had not done well. Then they selected schools randomly for each of the region's four districts. Overall, the teams attempted to be random in their selection of schools, and this was probably fairly well achieved.

29. Each study team guarded the anonymity of the schools in the sample. They attempted to visit the schools unannounced, but there were signs during the fieldwork that school staff may have known that they were going to be visited. Also, from the start the researchers only referred to schools by numbers that were randomly assigned to them, and the final reports do not mention the names of any schools. This has proved helpful during dissemination because no schools could be singled out by senior managers.

4.4. The Methodology for the Studies

30. The process followed by each team included four phases. An initial workshop to design the study and its instruments, field visits by two team members to each school for two days to collect data on the school, another workshop to analyze the data for findings and recommendations, and then report-writing and dissemination of the results.

31. *The Design Workshop*: In the initial workshop of two weeks, the teams prepared a definition of pupil outcomes, school factors, behavioral characteristics of each factor, and indicators to look for in the schools that would tell them about the characteristics. This conceptual framework used a format taken from previous materials developed by Heneveld and Craig (Heneveld and Craig, 1996), but the contents of each framework were decided locally. Consequently, each local conceptual framework is different and could be different for another part of the country. Based on the framework they created, each team then drafted two kinds of field instruments. First, they chose the school characteristics from their framework that they thought had the most influence on pupils' results and defined for each indicator of the selected characteristics what information they would look for in the schools. This Field Guide was then used by the researchers' in their interviews and observations at each school. Second, the Team designed and completed formal instruments for district data and school data. In Uganda a formal reading and writing test for P3 students was also administered in each school, but the other three studies were not able to include this, except for the grade 2 and 5 test results for the PASEC schools in Toamasina. Before finalizing the Field Guide at the end of this workshop, the researchers spent a day in local non-sample schools collecting data on two or three of the characteristics and analyzing it in the afternoon. At the workshop they also planned and scheduled the school visits**.**

32. *The School visits*: Travel to the schools provided a real challenge in all the studies. In the Rwenzoris, two female school heads laughed as they told about scrambling up a mountain in the mud to a village. In Toamasina one team of two walked over 20 kilometers to get to one school. In

Cabo Delgado where public transport is very limited, some of the researchers were stranded in the district office for a time, and, in the end, ten of the 26 schools which were actually visited were only visited for a day because of transport delays. In Singida distances between schools were very large, and some schools were quite remote with almost no basic necessities like safe drinking water. Still, most researchers reported satisfaction that they had the opportunity to look in detail at schools they would not normally visit.

33. At each school the two researchers interviewed the Head teacher and teachers and talked with pupils and community members using the field guide and the school level data form. They also reviewed documents and the schools' facilities, and they observed lessons. Around 100 lessons were observed in each study, averaging 3-5 in each school. In Uganda the researchers also administered the test to ten primary three pupils in each of the 30 schools. By the start of the analysis workshop, they had organized their notes and information on each school into a school file.

34. *The analysis workshop*: At the analysis workshop, the teams analyzed each characteristic from the conceptual framework for which data had been collected by looking at the data on the indicators from each school for the characteristic. The teams prepared for discussing the data on a characteristic by writing their schools' data for each indicator in a table on the wall that listed all the schools by number. Then, the team members discussed what the data suggests about all the schools, and the facilitator listed their findings on the indicators and the characteristic being discussed. Using this summary of what the data told them, they would then decide on criteria and rate each school "high" or "low" in relation to the other schools in the sample. As the categorization of each school by characteristic built up, patterns began to emerge on the wall chart where they listed the sample schools' categorizations on the schools' student results and characteristics. Once all thirty schools had been categorized on all the characteristics associations of each characteristic with PLE results and with other school characteristics could be hypothesized and then checked statistically. An example of one of these charts from Mozambique is included in Appendix 8.2.

35. The associations between characteristics and between each of them and a school's PLE results were checked by looking at the high/low rating given to a school on each characteristic. Each team discussed the qualitative data from the school visits in light of what they had seen during the school visits and the members' intimate knowledge of the region's schools, and the members calculated correlations using Yule's Q, a simple formula for testing correlations of binary variables (in two-by-two tables).[i] Also, a statistician at Makerere University calculated Pearson chi-square coefficients for the characteristics' association with pupils' results and with each other. The teams used these later to confirm or question the results of their analysis.

36. Based on the analyses completed through these discussions, the teams then selected the characteristics that seemed to be associated the most with student results as priorities for action. Using these priority characteristics, the team then prepared a diagram which shows how the characteristics relate with each other to influence student outcomes. These relationships among the priority characteristics are presented in the next chapter. Finally, the teams listed the reasons why schools might not be doing as well as they should on the characteristics and brainstormed ways to address these shortcomings locally. After the workshop, the national consultant used the results of the workshop – findings, conclusions about priorities and their relationship to each other, and recommendations – to prepare the final report.

37. *The Report and its Dissemination*: The national consultants in three countries were able to meet again with the research team to finalize the draft report. In addition, in Uganda and Tanzania, there were dissemination workshops at which team members shared their findings with local education, development, and political leaders and representatives from the national Ministry of Education. Follow-up has occurred or hopefully will occur at all levels: in individual schools by school heads, as has already happened in Uganda, at the district, regional, and provincial levels; and at the national level by both providing opportunities for the participating regions to use the results of the study and by encouraging other regions to use this methodology.

5. COUNTRY CONCLUSIONS

38. This chapter summarizes the findings, conclusions and recommendations of the four studies. The conceptual framework of characteristics and indicators for each study and each study's summary diagram showing relationships among the identified priority characteristics and to student outcomes is presented in Appendix 8.3. The next chapter looks across the studies at the priority characteristics based on the research teams' findings and conclusions about them.

39. Some general findings are similar across all four studies. First, learning levels in language and mathematics are low, and based on the test scores in the early grades in Uganda and Madagascar, confirmed by the school visits in the other two countries, basic skills in the early grades are poor. Second, schools seem to have enough, if not entirely adequate, materials for teaching. Textbooks are used, or are in the school, in sufficient numbers for students to use them in class. Almost all students have the basic tools for learning: chalk, pencils, pens, exercise books, small slates (in the early grades in Toamasina), and most teachers have teachers' guides and manuals. At least half the teachers in all the sample schools have sufficient education and teacher training, including in-service, so that the researchers expected them to teach with accuracy and methods that engage students. Also, the more qualified teachers seem to be fairly equitably distributed so that the less well-prepared teachers may have access to them. Teacher attendance and time in the classroom are fairly high, though not all the data supports this. Classroom and other infrastructure shortages are overcome, thanks to local adaptations of shifting and temporary facilities, and in two studies these facilities were not found to be a significant obstacle to learning. In Cabo Delgado and Singida student-classroom ratios are beyond being responded to by local adaptations, and these studies concluded that additional classrooms are a priority. And there are well-prescribed management instruments for teachers and students – e.g., schemes of work, school schedules, lesson plans, student records – which are prepared by and generally available from most teachers and school heads. In general these studies found that existing levels of school inputs, though still not fully adequate, could influence students' learning more than they are doing at present.

5.1. Five Rwenzori districts in Uganda

40. The main student outcome variable used in the study in the five Rwenzori districts, as in the other studies, was the pass rates in Division I and II (the highest of four categories) on the grade seven primary school leaving examination over the previous three years. The team used the variations in results on this examination among the sample schools as the proxy for student learning. Using this proxy the study found that some characteristics of a school contribute more to student learning, but, overall, learning outcomes are not what they could be. The study identified key learning-related school characteristics that define a "critical path" for improving a school's student outcomes. This critical path includes a head teacher who supervises teachers' preparation and coverage of the curriculum and pupil participation in the classroom; teachers who are prepared for class, regularly assess pupil work, and emphasize the use of instructional materials (especially textbooks) and the teaching of reading and writing; and high pupil participation through regular attendance, homework, and work that is regularly assessed. The study found that classroom availability, the availability of teacher housing close to the school, and external supervision do not differentiate high-performing schools from low-performing ones. The research team believes that if supervisors focused on Head Teachers' supervision and monitoring in each school external supervision would have an impact on pupil learning. Although school-community relationships were not explicitly studied, the field visits and analyses convinced the Research Team that this school characteristic also deserves attention in the future. The researchers' conclusions on the relationships among these characteristics and how they relate to each other in influencing students' results are summarized in the diagram in Appendix 8.3.1.

41. After considering a range of obstacles to overcoming the issues raised by the study's findings of the study, the research team arrived at six recommendations: 1. Strengthen the capacity of Head Teachers to monitor and supervise teachers; 2. Increase the amount and quality of teachers' planning, coverage, pupil assessment, teaching of reading and writing, and use of materials; 3. Improve the schools' environment for and teaching of reading and writing; 4. Empower communities to actively pursue improved school performance through school-based projects; 5. Conduct an experiment with providing teacher accommodation, including a formal study of the interventions' impacts; 6. Conduct a formal study of the pre-service Primary Teacher Training programs in the Rwenzori region in terms of how well they prepare teachers in the areas this study has identified as important. Practical programmatic suggestions for implementing these recommendations are provided in more detail in the full report (A Research Team, 2004, p. 13).

5.2. Toamasina Province in Madagascar

42. Test data for the thirty schools in the Toamasina sample came from both the PASEC national assessment tests and the schools' results over the last three years on the school leaving examination. Both sets of student results suggested that learning is low in most schools, but there was enough diversity among results to make comparisons. The analysis of the seventeen school characteristics included in the study in Toamasina led the researchers to conclude that there are eight of them that have the most influence on a school's learning results. According to both the observations at the schools and the statistical analyses of the data, three priority characteristics have a significant direct relation with students' results. First, the teachers' respect for their obligations to plan their teaching and students' assignments, to prepare their lessons daily, to maintain their "cahier journal", and to correct and remediate students' work are significant, but teaching methods and student participation in class were not associated with examination results. Second, in schools in which there are regular in-class evaluations of pupils and frequent school examinations, the students' results seem to be better. And, third, when the community supports the school materially and financially this probably influences pupils' outcomes because the staff of the school behave more effectively with their students. The study team's observations in the schools and the statistical analysis also support the conclusion that there are characteristics of the school Director that influence these key priorities for school effectiveness. In schools in which the head teacher checks teachers' teaching tools (plans, "cahier journal", etc.), holds regular staff meetings that pay attention to pedagogy, and guides teachers to improve their instruction, the teachers' preparations and evaluations of students are done more effectively. Similarly, the Director's effective administration of the school – checking teacher attendance, having a school improvement project, and auditing the school's performance -- contributes to these pedagogical tasks and to maintaining support from the community. Finally, the researchers were able to conclude that teachers who put into practice what they have learned through mastery of their material, diversifying their teaching, and staying in the same "cours" (grade level) for four or more years tend to plan and teach effectively.

43. The researchers retained two other characteristics as priorities, even though the statistical analysis do not support their significance. First, they hypothesize that supervision by those responsible for the school's academic effectiveness would have an impact on learning if these officers were more able to observe classes, check teachers' preparations and student evaluations, interact with the school Director, and give feedback to teachers and the Director. According to their own experience with a small program in the province, ten interactions with a school per year can have an impact on teaching and learning. In fact, the major recommendation in their report concerns local supervision, "supervision de proximité". Second, they consider improving teaching methods ("procédés d'enseignement et d'apprentissage") as a priority. The team was surprised and disappointed by the uniformity they found in teaching methods in the sample schools, especially since there was little evidence that training, particularly in-service training, had influenced practices in the

classroom. They hypothesize that if the methods they looked for in the study – class discussions, group work, richer questioning and answering sessions, etc. – became more widespread, research such as theirs would find that the schools where teachers diversified their teaching methods would have better examination results.

44. The study found that other school characteristics are in a positive condition in the province, even though these other characteristics were not judged priorities. First, textbooks are available in the schools and regularly used with students, and students and teachers have sufficient learning materials ("matériels didactiques") such as workbooks, pens, pencils, chalk, and teachers' manuals. Second, the researchers were satisfied with the amount of in-service training that is equitably distributed among all teachers, including the locally-hired and usually untrained supplementary teachers. And, third, although the schools' buildings are not adequate to the number of students, the space problems are being resolved well enough locally that the study did not find this to be a priority concern for the province at this time. The researchers' conclusions on the relationships among these characteristics and how they relate to influence students' results are summarized in the diagram in Appendix 8.3.2.

45. Based on an assessment of the obstacles that may cause problems for schools to do better on the priority characteristics that the study had identified, the research team focused on one recommendation from the study, the reorganization and improvement of local pedagogical guidance for schools and teachers. The recommendation has four aspects: (1) Group schools within a "Zone administrative et pédagogique" (ZAP) of around fifteen schools into clusters of 4 or 5 schools and assign an experienced school head with no teaching responsibilities to guide teachers in each of these sub-zones to improve classroom practice. These Directors would work with teachers in schools, facilitate discussions among teachers through quality circles, and ensure that there were exchanges between schools. (2) Create a professional corps of Chefs ZAP by setting minimum qualifications and reinforcing their competences through frequent interactions with the districts' pedagogic counselors and inspectors. (3) Plan and implement a training program for the Directors of schools and the Chefs ZAP that would give them the skills to follow up on in-school practices that this study has found important. (4) Add another staff member in each ZAP to handle administrative tasks so that the Chefs ZAP can work more with the schools to improve pedagogy.

5.3. Cabo Delgado Province in Mozambique

46. Examination results, the proxy chosen for learning outcomes in all the studies, were not very high in Cabo Delgado over the last three years. Variations in results between years in many schools were as much or greater than the variations between the schools, and these results confounded the statistical analyses. Reaching conclusions about priority characteristics therefore had to depend more on the judgment of the team members than on the quantitative measures of association.

47. The study found a number of positive conditions in the sample schools. School records suggest that the managers of the system are providing oversight and assistance in the schools with almost half of the 26 schools for which data was obtained having records of schemes of work and student evaluations. The teachers are fairly well qualified for an isolated area with limited capacity for advanced training. 56% of the teachers had psycho-pedagogical training (almost the same as the national average), and all teachers in the sample had at least 15 days of in-service training in the last year or two. The schools have adequate supplies of teaching materials, including student textbooks and teacher manuals, and the distribution is such that the schools could not be differentiated on this characteristic. Two-thirds of the schools were found to respect lesson times and to be using the textbooks. And the researchers concluded that, in general, communities know and accept the importance of education for their children. The most negative condition found is with respect to the schools' infrastructure. Ten of the 25 schools for which there is data have more than 100 students per

classroom. The analysis disappointed the researchers' expectations with respect to how teachers teach and in terms of the communities' active support for their children's schools.

48. The research team was able to arrive at conclusions about which characteristics are associated with students' results and how they relate to each other even though the study's sample of schools and the fieldwork had presented problems. The findings included the following. First, the analysis of the sample's association between school management characteristics and student results was weak. Second, the sample schools' data does not suggest that the teachers' formal training, the application of experiences to their teaching, their skill in interesting students in lessons, and their punctuality are contributing significantly to student learning. In fact, the teachers' mastery of the curriculum and teaching manuals was the only characteristic where the association with students' results as measured by the Pearson chi-square coefficient was significant while also having a strong Yule's Q coefficient, and this relationship was negative. The research team did not accept that higher mastery by the teacher would contribute to lower student results. They found the same result, though weaker, with the Yule's Q measure for all the characteristics of classroom lessons ("as aulas"). Third, in about half the communities, the understanding of the value of education translated into contributions to the school, but neither the communities' understanding or contributions to the school was associated with student outcomes. The only characteristic where the association with outcomes was strong was a school's availability and quality of classrooms and other facilities.

49. Various factors inhibited the effective implementation of this study which probably caused some of the findings to be counter-intuitive. First, because the sample schools were chosen fully at random the categorization of schools' student examination results into "high" and "low" was not easy. Given the other problems the study faced, it would have been better to pre-select fifteen schools that were clearly in each category. The variation in annual results across sample schools was not very marked, and the variation of a school's results over the last three years appears to be as much if not greater than the differences among schools. Second, the fieldwork started late because funds were not available in time, and travel to the schools was even more difficult than had been anticipated. Therefore, many schools were only visited for a day and, instead of two people for two days at each school, much of the data depended on one researcher's one-day visit. Finally, a few of the researchers who visited schools did not attend the analysis workshop all the time or at all, and the benefits of their first-hand observations beyond their notes were not available.

50. Based on the findings and conclusions across all the school characteristics studied and taking into account the difficulties in the design and implementation, the research team was able to identify five priority school characteristics that should receive attention in Cabo Delgado. They are:

- The school's infrastructure (classrooms and furniture) (*infraestrutura*)
- School management's monitoring and help within the school (*acompanhamento e apoio*)
- The teachers' mastery of their subject matter and how to teach it (*domínio dos conteúdos de ensino*)
- The teachers' success in stimulating students to learn (*conduçâo do aluno para aprednizagem*)
- Students' active participation in class (*participaçâo activa dos alunos)*

The researchers' conclusions on the relationships among these characteristics and how they relate influence students' results and each other are summarized in the diagram in Appendix 8.3.2. The team did not have the time to finalize recommendations based on their conclusions.

5.4. The Singida Region of Tanzania

51. Students' pass rates on the school leaving examination in Singida are among the lowest in the country. According to the report, "the majority of the pupils, despite the weaknesses of the quality of the examination failed to score 43% or more (in 2004?)." (Swai, et.al., 2006: p. 32) The average

pass rate for the sample schools in Singida was higher because the fifteen schools categorized as "high" on this characteristic were the best schools in the Region. This allowed comparisons to be well-founded between the two groups into which the sample was divided. Based on their qualitative and quantitative analysis of the data the researchers in Singida concluded that there are eight key characteristics out of the nineteen characteristics studied that most influence pupils' results. Their data suggests that Singida's primary schools are more effective when the teacher (1) motivates pupils for effective learning, (2) has mastery of the content and methodology he/she is teaching, and (3) carries out timely assessment and evaluation of pupils' learning; and when the head teacher is (4) a role model who (5) monitors and supervises the teaching and learning processes. The teachers' and school head's effectiveness is further enhanced if (6) the school has adequate infrastructure. The analysis of the characteristic-to-characteristic relationships, aided by the Yule's Q and Pearson chi-square coefficients, revealed two more characteristics of the school administration that relate strongly to more than four other characteristics, even though they do not relate directly to pupils' PSLE results. When (7) the school administration communicates effectively horizontally and vertically and (8) it utilizes school funds effectively so that these two characteristics, like adequate infrastructure, reinforce the effectiveness of the teacher and the head teacher. The eight critical characteristics and the way the analysis suggests they relate to each other to contribute to student learning are summarized in Appendix 8.3.4.

52. On the other hand, the analysis led the team to exclude some of the indicators that had been hypothesized to influence student learning. Some of these indicators were absent in nearly all the schools (e.g. teachers using teaching methods that encourage problem solving and creativity, constructive use of text books and other learning materials, school committee checking on performance of school activities, availability of a school feeding program). Others did not show enough variation to be used to differentiate among schools (e.g. teacher marking pupils work and giving feed back on time, use of learner friendly language, Head teacher engaging in classroom teaching, head teacher clean and well dressed, capitation grant received on time). External supervision was also found to be less significant than had been hypothesized because schools were rarely visited with little or now follow-up. The team attributed this to low staffing in widely dispersed geographic areas and unclear accountability between the supervisors and the school staff and communities. The researchers concluded, and the data supports it, that supervision in the school by the community and the school head in supervising the school and the teachers is a higher priority than external supervision.

53. As portrayed in the diagram showing relationships among the priority characteristics, the conclusions suggest that primary schools in Singida region tend to have better results when the head teacher is a role model and he/she monitors and supervises the teaching and learning processes. His or her actions influence the teachers' mastery of content and methodology and their timely assessment and evaluation of learning; leading to motivation of pupils for effective learning. The other priority characteristics are 'adequate school infrastructure' and the school administration's communication with everyone and its ability to utilize funds the reinforce the other priority characteristics in influencing achievement of better learning outcomes. This critical path of priority characteristics led the team to recommend increasing the school administrators' capacity to monitor and supervise school activities, especially to help teachers to make more effective use of textbooks and other learning resources. They also recommended taking steps to improve the teachers' mastery of subject matter and teaching methods and to motivate all school staff more effectively, including by reducing classroom overcrowding and by distributing teachers among the schools more fairly. Because of the lack of impact from external supervision, they also suggested implementing guidelines that clarify roles, relationships and linkages among stakeholders, taking into consideration the region's resources and geography.

6. FINDINGS AND CONCLUSIONS ON SCHOOL CHARACTERISTICS

54. The Basic building block for this research on the quality of primary education in Sub-Saharan Africa has been the general factors that may influence how effective a school is in helping its students learn. As has been seen, these factors include the school administration (including the Head Teacher), the teachers, teaching and learning processes in the classroom, learning materials, the school's physical environment and infrastructure, external monitoring and supervision, and community involvement and support. This chapter summarizes the results of the studies on these factors across the four countries and draws conclusions that may be valid for primary education in the other parts of the countries studied and elsewhere in Sub-Saharan Africa.

6.1. The School Administration (including the Head Teacher)

55. All the research teams started out thinking that the school administration, and especially the school head, would be a significant factor influencing student learning. They all defined an effective administration/administrator as one which communicates well with teachers and with the community, that supervises and supports teachers, that sets a model for appropriate behavior and management in the school, and that takes initiative to see that the school's environment improves. The results of the studies have shown that head teachers influence the community's participation in the school and the teachers' professional behavior, but they have less impact than was expected on how teachers teach. The findings are compared below.

56. *Communication*: Within the school, the findings suggest that most school heads are conscientious about communication. All four studies showed fairly high levels of information sharing within the school, usually through posted notices or at school assemblies. Also, staff meetings are regular: 28 of the 30 schools in the Uganda study had staff meetings, though ten schools had only had one in the last term. In Madagascar 24 of the 30 schools reported teachers' meetings, most of them monthly or twice a term, and all but one of the 24 schools reported that pedagogy was a significant topic in their meetings. The other three schools in the Madagascar sample all had three or less teachers so formal meetings did not occur. And the Tanzania study found that 28/30 schools had regular staff meetings and "barazas" (whole school meetings). Mozambique's data is not as precise on this point, but the head teachers of most schools reported regular assemblies and had posted information for everyone.

57. The school administrations' communication with pupils, parents, and the rest of the community is more complicated. All four studies included this characteristic in their definition of an effective administration. However, the Madagascar and Uganda teams left this characteristic out of those they chose to study, and Mozambique only made a passing reference to meetings and records of meetings with the community among the indicators of communication. During the analysis of their data on community participation, the Ugandans decided that a head's communication with the community was an important characteristic that should have been studied. They included this characteristic in their cognitive map of the priority characteristics that can influence learning in the Rwenzori region. Only in Tanzania was communication with the larger community important. There, 19 of the 30 sample schools were judged to have held more than 50% of the expected school committee meetings. 23 of the schools had held "barazas"(whole-school meetings), and twenty of them had had parents' meetings.

58. *Supervision and support of teachers*: All the studies included indicators for the supervision of teachers, including checking of their written preparations and records, classroom observations, support to teachers, in-school in-service training, and attendance. Every study design emphasized that the school head should check written documentation that teachers are supposed to prepare and use: schemes of work ("dosificação" (Pt) and "répartition" (Fr)) , lesson plans, "cahiers journal", student registers, progress records, etc. The Tanzanians noted explicitly that the school head's checks were only perfunctory, and the other studies indicated that this work may be more an administrative chore than a tool for pedagogical supervision. In the field, though, the researchers found that the monitoring of these documents seems to be quite formalistic. For example, the Tanzanian report notes that head teachers tend to only look cursorily at lesson plans, and 17 of the 30 schools were able to show teacher log books but without the school head's signature, the accepted sign that supervision had occurred. Similarly, the main sign that the 16 school heads in the 30 schools in the Ugandan sample had checked schemes of work was the head's signature on the document; and in Mozambique the team recorded that 16 school heads had checked class registers ("livros de turma") by signing them. None of the teams felt that the monitoring of the documents actually influences teaching and learning very much.

59. All the teams except the Tanzanian team hypothesized that if the school head observes classes, better student learning will occur. However, in the field they found that there is little classroom observation going on. The most hopeful situation is in Mozambique where schools are supposed to have a scheduled program of classroom observations, done both by the head and by teachers observing each other. However, only nine of the sample schools showed the researchers the schools planned schedule of observations and at least some classroom observation forms that had been completed, and only five head teachers had themselves observed classes. Other Mozambican school heads also reported that they were conducting observations of classes. The results for the other countries were not better. The researchers found that only 7 of the 30 school heads in Uganda and 3 of the 30 in Madagascar reported observing classes, and even when the observations occurred the researchers doubt that effective feedback was given afterwards. The Tanzanian researchers did not use classroom observations by school heads as an indicator of their effectiveness, but they did examine whether the head teacher organizes and allows staff to attend in-service training courses and workshops. The researchers found that 21 out of 30 schools held school-based subject seminars, but only four of 28 schools had sent more than 50% of their teachers to in-service training course.

60. There is also very little in-service training going on in the schools. The Mozambique study found that only two schools had a plan for in-service training ("capacitação") and explained that this is really the responsibility of the Zonal office (ZIP: "Zona de Influência Pedagógica"), even though providing training was chosen as an important attribute of an effective school head. In Uganda, in-school training was mentioned in the conceptual framework but not included in the study, perhaps because the Coordinating Centres that serve around ten schools have this responsibility. In Madagascar, it was only posited that the school administration should check to see if teachers were using the material learned in in-service training in their teaching. They found that not enough classroom observation was going on for this supervision to help, and their own observations left them disappointed at the teachers' failure to use what an active in-service program has provided them (see section on teachers). Tanzania did not posit in-school teacher training as an indicator of an effective school administration.

61. School administrators may also be expected to support their teachers in other ways. The researchers in Madagascar found that 20 school heads "support their teachers technically and morally" by providing one-on-one interaction, but this is more often at the initiative of the teacher than of the head. In Tanzania the researchers measured support to teachers by collecting data on the delegation of power to other teachers in the school (22 schools), on the existence of subject committees in schools (9 schools) and on whether the Head teacher rewards staff (2 schools). The Uganda team defined a characteristic related to motivating teachers, but it did not explicitly look into this characteristic in the field. Also, the Mozambican team's definition of a positive internal ambience to the school suggests a concern for how the administration treats teachers, but they did not collect data on this factor. Their

characteristics of a good ambience included teachers' and others' participation in decision-making, being open and collaborative, recognizing good work, and achieving established norms. It is interesting that all four studies defined support and motivation for teachers as a characteristic of an effective school. However, only two studies actually studied it, and the two studies that did include it concluded that it was not among the most significant characteristics for student learning.

62. *Summary conclusion*: Overall, this factor has not been found to be as significant for a school's learning outcomes as the research teams had hypothesized. First, In the Uganda and Mozambique studies, none of the head teacher characteristics had significant associations with student results based on the data alone. In Madagascar, the school head's pedagogical tasks – leading meetings, supervising and supporting teachers, and checking on their record-keeping -- have an association with students' results, and in Tanzania the researchers concluded that the head's monitoring and supervision of school activities -- checking on teachers' schemes of work, lesson plans, and log books; and following up with teachers and students -- probably influence a school's results. However, neither of these teams was satisfied that the relationship with results was strong. In Madagascar the team was disappointed that the school heads did not observe more classes, that they did make sure that in-service training was used in the classroom, and that the supervision of teachers' preparations was done so perfunctorily. Tanzania shared this last concern explicitly, and Uganda and Mozambique both concluded that if the leadership in the sample's schools were performing closer to the expected levels a stronger association with learning outcomes would have been found.

63. Associations were also found with other characteristics which suggest that the school head may have an indirect influence on learning outcomes, primarily by his/her oversight of teachers. In Uganda there is a relation between the head's supervision and the school's teachers' preparedness to teach which itself is strongly related to student outcomes. In Tanzania, despite a low measure of association using Yule's Q, the team decided that if all the indicators of monitoring and supervision were in place, it would support student learning. The Pearson chi-square coefficient of .068 gives support to their decision. In sum, the school head's most significant contribution to a school's outcomes is probably through his/her work with teachers. However, current pedagogical interaction of school heads with teachers through classroom observation, feedback to them on their teaching, and staff development activities is currently not adequate to have as much of an impact on teaching methods and student learning as the researchers expected to find.

6.2. An Effective Teacher, Including Teaching and Learning Processes

64. Three of the four research teams defined an effective teacher's characteristics and effective teaching and learning processes separately from each other. In the Tanzania study they were combined. Between these two factors, all of the studies analyzed the extent to which the following characteristics are related to student learning : (1) the teachers' training (both pre-service and in-service) and their mastery of content and teaching methods; (2) their preparations for teaching; (3) their practice in the classroom (including student participation levels, the use of materials, and respect for time); (4) the evaluation of students; and (5) their behavior as a role model for others. Teachers' preparation for their lessons and their evaluation of students were found to have particularly strong associations with student outcomes. A teacher's level of education does not seem to be associated with his/her performance as much as in-service training does. This section summarizes the findings for each of these characteristics.

65. *Teacher pre-service and in-service training and mastery of content and methodology*: The level of pre-service training and the amount of in-service training for teachers was selected as an important school characteristic in all four study designs. 80% of the teachers in the Uganda sample were trained (Grade III and V). 56% of the 258 teachers in the Mozambique sample had psycho-pedagogical pre-service training. All teachers in the Madagascar sample had the minimum level of formal education to be a teacher (BEPC), and 55% of them had formal teacher training as well.

However six of the schools in Madagascar (20%) did not have any teachers with pre-service teacher training. In twenty-three of the Tanzanian sample schools more than 50% of the teachers in that school had pre-service teacher training (Level IIIA), and the lowest percentage among the seven exceptions was 38%. Except for the six schools in Madagascar, nearly all the schools had one or more teachers who had received pre-service teacher training. The researchers in Madagascar, Mozambique, and Uganda all concluded that they could not find any significant differences in teaching performance between teachers who had been trained according to the norms for government service and those with less education and no or little teacher training. Only the Tanzanians concluded that the teachers in their sample who were trained tended to have greater subject mastery and better command of teaching than the rest of the teachers.

66. All of the teams also looked at in-service training and its potential contribution to the teaching learning process and to student results. In-service training opportunities for teachers have been high. In the Rwenzori districts of Uganda, teachers from eighteen of the 30 schools had participated in an in-service program in the last year, and in Toamasina Province's sample in Madagascar 93% of the teachers had participated in some kind of training in the last two years, most teachers having participated more than once. Also, all the teachers in Cabo Delgado's sample had had a minimum of fifteen days training in the past two years, and in Tanzania teachers from 22 of the 30 schools had attended a workshop on participatory teaching methods in the last year. The Cabo Delgado study included the hypothesis that teachers who used their training in their teaching would have better student results. They found this to be true, but the Mozambicans detailed comparison of the schools suggests that it is the in-service experience that has contributed to better student outcomes, not the teachers' formal training. In the other countries no significant relation was found between teacher training and student performance, and training's influence on other teacher characteristics was weak. Overall, teacher training and mastery of subject matter and methodologies do not seem to be contributing much to the quality of a school's learning results. The sections that follow help explain why this may be true.

67. *Preparations for teaching*: The studies found that the preparations teachers make for teaching their lessons tend to relate to students' results in a school. Preparations defined and studied by all the teams were preparing and using schemes of work, lesson plans, student records, and, in the case of Madagascar and Tanzania, a journal or a subject logbook that records the experience of daily lessons. The Rwenzori study combined teacher training and mastery indicators with actual preparations to teach and concluded that "teacher preparation is important when it translates into the teacher implementing activities with pupils that are associated with pupil outcomes." In this study, these resulting activities included covering the subject according to the syllabus, explicitly teaching reading and writing, stimulating student participation, and evaluating student work regularly. In Toamasina, teacher preparation included bi-monthly and annual schemes of work, daily preparations, and the regular journal of activities. Although these teacher tasks were being done well in less than half of the sample schools, schools that were doing them well seemed to be achieving better student results, and this characteristic's associations with all the other teacher and teaching/learning process characteristics were significant. On the other hand, the Mozambique study found only 9 schools that had well-done and available schemes of work ("dosificação"), and only two of these had been classified among the schools with better student results. In Tanzania the researchers in Singida did not define preparations for teaching as a significant teacher characteristic, but they did find in checking on the head teacher's supervision of teachers that they are signing schemes of work and lesson plans in 26 of the 30 sample schools. So, teacher preparations are important in Tanzania, but the study results did not provide data on them. Even taking into account the negative findings for Mozambique, it seems clear that teachers' preparations for teaching are important for student success.

68. *Classroom teaching/learning processes*: All the studies posited from the beginning that the classroom teaching/learning processes would be critical to students' results, and each research design defined for the study what indicators the researchers would look for in the schools. The indicators for teaching processes were found in both the definitions of an effective teacher (Tanzania) and as characteristics of the teaching/learning process itself. The major characteristics investigated

were a) the methods the teacher uses with the students; b) the extent to which students participate actively in class; c) the availability and use of teaching materials, especially textbooks; d) whether time is used effectively or not; and e) student evaluations. In general, the researchers found that there is very little variation in teaching methods: teachers talk; students are engaged, but passively; textbooks are available but poorly utilized; and students' evaluations are fairly regular. There were different conclusions across the studies about how teachers use time. After teacher preparations, student evaluation seems to be the characteristic that, across the studies, is most strongly associated with schools that have the better student results. The Mozambique study did not produce enough classroom observation data for it to be analyzed.

69. The researchers in Madagascar's Toamasina Province collected data on types of classroom teaching methods, and found examples of student individual work, group work, and class discussions in many schools. Tutoring of weaker students by stronger ones was organized by only a few teachers. However, the dominant classroom method in the sample schools is individual work by students, except in the one school that seemed to be committed to group seating and group work in all the classes. Lessons are usually accompanied by some form of oral and/or written evaluation of the students' learning. Questioning between the teacher and students was also checked. The teachers ask questions, and students answer without hesitation; but students almost never ask questions of the teacher (observed in classes in only 4/30 schools) and rarely of each other (in 13 schools). The students also carry out assignments when asked to. These activities are accompanied by the presence of books on students' desks, usually with one book shared by two students, but the books are poorly utilized. Either the teacher reads and asks a question printed in the book, or a student may be asked to read. In all activities, the teacher remains in the front of the room and does most of the talking, and students participate only as actively as instructed to. The research team was disappointed to find this to be the norm after as much training as the teachers have received on improving students' active participation in learning.

70. The situation that the researchers found in Tanzania was not much different. First, the major teaching tool observed was the textbook. However, only 12 of the 30 sample schools had enough books to meet the one book for four student ratio targeted by the government, and the teachers brought the books to class and took them away after class. In the classes observed, the researchers found other teaching and learning materials in only 3 schools. Participatory, learner-centered methods, which included asking questions, were found in classes in sixteen schools, in eight of which all the teachers used them. They reported that in 24 of the 30 schools students were not given an opportunity to ask questions but only responded to closed-ended questions posed by the teacher. The Rwenzori study had a similar conclusion: "The teachers interacted with pupils almost solely through question-and-answer and chalk-and-talk methods. Student-centered work was only observed in three schools, and student work displayed on classroom walls in only four schools." (A Research Team, 2004: p. 6).

71. Interestingly, three of the four research teams included a characteristic related to time management as one of the characteristics that could influence student outcomes. These included: "respect for the planning of learning" (Madagascar), "the teacher respects the pace and time of the lesson" (Mozambique), "timetables are followed" (Uganda). In Toamasina, there was a lack of uniformity in time management. Only 63 of the 252 lessons observed were judged to have stuck to the planned time. In Cabo Delgado most of the teachers presented their lessons in the planned time (19/26 schools rated "alto"). Data was not collected on this characteristic in Uganda, even though it was in the conceptual framework, and it wasn't included in the research design in Tanzania. All of the studies concluded that this was not a priority consideration for improving student learning.

72. *Evaluation of students*: On the other hand, the studies all found the evaluation of students to be important for students' learning. The researchers looked at teacher and school-wide evaluation practices, including homework, and found them to be widespread and fairly regular. In Madagascar teachers in all but one of the sample schools obtain oral and/or written feedback from students during each lesson, and 18 of 29 schools give and check homework at least once a week. All but four of the

schools give school-wide tests every two months. The team in Mozambique did not include homework or in-class evaluation in their study, but they did find that 11 of 26 sample schools kept records of student evaluations. Only 3 schools could not show any system for keeping track of student grades. In Tanzania, all 30 schools use a school-wide system of pupil assessment. The researchers did not observe any teacher who was implementing his/her own student evaluations, but they check students' work and write comments in the exercise books in 24 of the 30 schools. Less than 50% of the schools give any homework, and in ten other schools some teachers give it and some do not. The schools that do give homework tend to have better school-leaving examination results. The findings in Uganda help put these other findings in perspective. There, all the teachers observed had marked students' work in their exercise books in red, but this checking only included comments to the student in seven schools, all of which had better results on the school-leaving examination. Also in this group were the only two schools that reported that they gave monthly tests to students. The Ugandan researchers concluded that evaluation through homework and regular testing are significant contributors to student results, as did the researchers in Madagascar and Tanzania. These findings were supported in all three studies by both the statistical measures of association that were used.

73. *Other teacher characteristics*: The Tanzania and Uganda studies included the expectation that the school head and teachers should set a role model for the school community. Important in this role is the expectation that the adults will be punctual and regular in their attendance at the school. The Mozambique study also included this indicator. The data collected on this issue across the studies was not adequate to obtain a clear picture on the adults' punctuality and attendance at school, and no study found it to be a problem. This author's experience from conversations and in visiting a few schools in each country suggests that there may be more of an issue here than the studies have found. Considering total instructional time for students, the attention given them is eaten into by individual lessons starting late and ending early, by teachers being at the school but not in the classroom, and by teachers and heads actually being absent. The results of these studies suggest that careful research could be helpful to establish if punctuality and attendance are variable among schools and to see if they are associated with students' outcomes.

74. Other research has determined that language of instruction and languages used in the classroom can be an important characteristic that influences student learning (see, for example, ADEA Newsletter, April-June, 2005). However, none of the research teams defined this characteristic carefully in their research designs, and little data was collected or analyzed. All four countries are dealing with the introduction of a non-mother-tongue for instruction during primary school. In Madagascar, the Malagasy-speaking children begin to learn French; in Mozambique, Portuguese is learned alongside the local languages; in Tanzania, Swahili is added to whatever local language the children speak when they come to school; and in Uganda the local languages are learned alongside English. The Rwenzori researchers were the only team to even look at this characteristic, and they observed that "the teachers' use of English during the observed lessons was not an issue." (A Research Team, 2004: p. 6) When asked, the Malagasy and the Tanzanian research teams suggested that the language issue is not a problem for teachers because they adapt what language they use to their own skills and to the needs of their students, whatever the national policy on language of instruction may be. They said that the second language is part of the context that teachers cannot do anything about. So, they accept it. The local researchers' low priority about language as a characteristic affecting student learning may be set against the high attention it receives in policy discussions and curriculum planning. What might explain this difference in perception between policy-makers and system managers on the one hand and front-line educators on the other?

6.3. Learning Materials

75. Compared with ten years ago, the availability of learning materials in schools, especially textbooks, is impressive. In each study the researchers found enough textbooks in the schools for students to be able to share copies in class. However, the researchers concluded that generally the books are not used very effectively. In terms of availability and use by students, the sample schools in

Toamasina all had books but usually not enough to reach the Government's target of one/per pupil for the main subjects. The shortfall is probably due to the growth in enrollments and to the late delivery of new textbooks this school year. For the 24 Cabo Delgado schools for which there is data the draft report observed that all but eight of them have sufficient textbooks for each student to use one, and all but a few teachers of grade 5 have teachers' manuals for their grade. The researchers in Singida saw teachers using textbooks in 26 of the 30 schools, but the number of books (on average one book for three students) and frequent double-shifting in schools mean that the teacher distributes them to the class and collects them at the end of the lesson. The Rwenzori schools were also found to have textbooks in the schools, and most of them had books roughly at the Government's objective of providing one book for every 4 students in each of the main subjects. However, in over 100 classes observed in the Rwenzori study textbooks were only found being used in the classroom in five schools. From the field observations it appeared that most books are kept in storage and have not been put into regular use.

76. While books are available in the schools in sufficient quantity to be helpful, the teachers' use of the books disappointed the researchers. The Ugandan failure to even put the books in the students' hands is the most disappointing, but the teams in Madagascar and Tanzania found that how the teachers use them with students is not very effective. The study in Mozambique did not look very closely at classroom interactions, but the draft report noted that about half of the teachers that were observed teaching (34 of 71) adapted the learning materials, presumably the textbooks, to the subject matter in the curriculum. The Malagasy study found that textbooks were used in a ratio of one book to two or three students in 225 of the 249 lessons they observed. In eight schools students are even allowed to take the books home. However, their in-depth discussion of their classroom observations brought to light that the textbooks are used very formalistically in almost all classes. The teacher or a student reads from the book; the teacher asks or writes on the blackboard verbatim a question from the exercises in the book; and the students respond if called on or if told to write in their exercise books. The Tanzanians found pretty much the same problem, commenting in their report that teachers "did not guide pupils to get information on topics under discussion" and that they asked closed-ended questions. It appears that no researcher in any of the countries found a teacher who used the material in a textbook as a springboard to expanding the topic being studied.

77. All the studies also looked at the supply of student materials (exercise books, pens and pencils, math sets, and in Madagascar "ardoises" (small blackboards for the early grades). The provision of student materials is nearly universal, whether provided by the schools, external donors, or parents.

6.4. The School's Infrastructure

78. Most African primary schools have inadequate space to house all their students comfortably in traditional classrooms. The studies confirm this fact: The Rwenzori sample schools are in the best condition. 91% (259/286) of the classrooms there are of permanent construction, even though the team concluded that the classrooms in seven schools were overcrowded. For the sample schools in Toamasina, the study concluded that only six schools had classrooms large enough to accommodate their students. 17 schools had less than one square meter per student and one school meets under a tree. Also, 10 schools used double shifts and 16 had multi-grade classes (probably also due in part to a teacher shortage). Overall, 246 "sections" of students are accommodated in 179 classrooms. The statistical analysis of the association between a school's infrastructure and its students' results was not significant in either of the Madagascar and Uganda studies. However, the association was significant in the other two countries' studies. In Tanzania, the researchers found that the sample schools had very high student/classroom ratios with 9 schools with above 80 students per classroom and 22 above 60 per room. Nine schools had more temporary classrooms than permanent ones. The study also noted shortages in teacher accommodations (as did the Rwenzori study), school offices, and storerooms. The situation in northern Mozambique is even more unsatisfactory. In ten of the 25 schools for which there is data the student/classroom ratio is over 100 students per classroom.

For example, one school of 1224 students has 4 classrooms; another with 1510 students has seven rooms; and a small school by comparison has 260 students accommodated in two classrooms. Also, the researchers classified about half of the classrooms (41/90 rooms) as "pequenas", suggesting that overcrowding is probably even worse than the data suggests. This comparison across the four samples suggests that there may be a threshold of crowdedness beyond which students' results are influenced. The Singida study's finding of a significant association between the physical capacity of a school and the teachers' motivation of students to learn offers a suggestion as to how overcrowding may influence what goes on in the classroom.

6.5. External Monitoring and Supervision

79. Since most of the local educators on the research teams for these studies are supervisors and managers of the education system, it was expected that external monitoring and supervision would be important, both to be studied and in its impact on student learning. Three of the countries included this factor in their conceptual framework of important school characteristics and indicators. Mozambique dealt with it indirectly. The data suggests that visits do occur about as frequently as the system can expect, given available resources and local geography. However, the frequency of visits, the breadth of purposes and topics for them, the lack of frequent regular follow-up, and some uncertainty of roles between school heads and the external supervisors seems to be contributing to the insignificant association that the studies found between external supervision and monitoring and teaching and learning practices in classrooms. The three studies that looked at this factor directly found the same situation: external supervision of a school is not associated with whether the students do well on school leaving examinations. The Toamasina study found that 26 of the 30 schools had had at least one visit in the last two years, usually by the Chef ZAP (the local education officer), and the average number of visits to a school is four per year. In Singida, all but four schools had also been visited recently, but only once or twice a year (except one school which had had 18 visits!). In the Rwenzori districts all but four schools had had at least 3 visits in a year from the local Coordinating Centre Tutor (CCT) who is charged with improving teaching and learning in the schools, and five schools had had eight to ten visits in the last year. That so many of the schools in these very rural areas are visited suggests that the supervisors are conscientious about coverage and able to move around.

80. Taking into consideration all the tasks external supervisors are supposed to do, expectations from the external supervision are very high, and the small number of visits per year that each school may expect to receive cannot allow the visits to be all that effective. For example, the following indicators of supervision from the Tanzania study suggest what the local expectations from the schools are. The researchers wanted to know: Are objectives of each visit available in the school's files? Is there a written inspector's report? How knowledgeable are people in the school about the issues raised and recommendations made during a visit? What were the supervisor's comments on the school's "whole plan"? Are there pre- and post-visit letters from the supervisor? Did they have feedback meetings between the supervisor and school staff? In Uganda the data revealed even more varied tasks for external visits to schools which included financial management, needs assessments, monitoring of school records, monitoring of sanitary practices (mainly latrines), advice on discipline, classroom observation and post-observation conferences with the teachers observed, Continuous Professional Development (a Ministry program), and in-school refresher courses. Overall, with similar variety in tasks from the Toamasina schools the Madagascar study summarizes what is probably the dominant nature of most visits: "En général, les visites sont constituées de contrôle des affichages obligatoires et d'entretien avec le directeur." ("In general, the visits are comprised of checking on (the school's) obligatory documentation and an interview with the school head.") (Mad, p. 26) This report goes on to suggest that schools with ten or more visits per year, focused on observations of lessons and feedback to teachers, can have an impact on results (as was observed outside the sample and in one private school in the sample). This suggestion addresses a similar problem as the Rwenzori's recommendation that external supervisors focus their visits on school

heads and their supervision of the priority characteristics for student learning (teacher preparation and coverage, pupil assessment, use of instructional materials, and emphasizing reading and writing).

6.6. Community Involvement and Support

81. Theoretically, community involvement and support can be expressed by material support – funds, labor, food, etc., by parents' moral and material support to their children to attend school, by participation in governance of the school, and in classroom activities as aides and instructors. All but the last of these aspects of involvement were explored by the studies. First, in terms of material support, most of the communities in the Toamasina sample help to pay supplementary teachers (22/30 schools, nine of them with additional assistance from local government), provide labor or funds for rehabilitation and construction of buildings (23 schools), donate furniture (17 schools), or contribute to improving the school's environment (14 schools). In Cabo Delgado, the researchers found that communities send almost all the children to school (one of the team's selected indicators of support), and they are actively involved in the schools. The data collected indicated that community members, including parents, participate in meetings, contribute money and/or labor for the construction of classrooms (at more than ten schools), and support other activities. From the team's notes it appears that community participation includes local governmental units as much as it does community residents and parents of students and that much of the local assistance comes from this source. Second, Tanzania is the most decentralized of the four countries with much of a school's funding being given directly to it. Consequently, the conceptual framework for the Singida study differentiated between "effective financial and material support" and "community involvement." The study found that the main financial and material support comes from contributions from local and central government and from "other stakeholders", in which the community and parents are one group. Perhaps because poverty and the fact that government financial support is so obviously there the communities may themselves contribute less materially than elsewhere. The research team found that only nine of the schools received money from the community and eight schools received materials from the community, some of which came from individuals. However, other forms of community involvement are strong in the Singida schools. For example, twenty-four schools have functional financial committees, of which fifteen meet regularly and 23 have well-kept financial documents. More importantly, the Singida research team's meaning of community support focuses more directly on children than on the school. The indicators of this characteristic that chose showed that parents and the community provide school uniforms (27/30 schools) and scholastic materials (28 schools). The research team also thought that the communities would be supporting school feeding programs (5/30 schools contribute), orphans (7 schools), and needy children (7 schools), but the results are not what they hypothesized. Finally, the Rwenzori study found that 16 of the 30 sample schools have received financial and material support from their communities in the last three years, twenty-one of them giving in-kind contributions and nineteen of them to employ extra staff.

82. The studies in Madagascar, and to a lesser extent in Uganda, found that community involvement is significantly related to pupils' results. These are also the two countries that have the highest level of community contributions, and in both countries these funds pay supplementary teachers and school guards (in Uganda). In Tanzania, the research team's definition of community involvement was limited to support to directly to pupils, and they found that parents are supporting their own children's uniforms and scholastic materials, not other children in the community. The Mozambique report concluded that the communities' "reticent support" for the life of the school may be due to the community members living conditions and the need for immediate benefit from their efforts. It may be that an overarching factor that can influence student achievement is the general community's collective expectations for its children's education, evidence of which is stronger in Toamasina and the Rwenzoris where economic opportunities are probably greater than in Cabo Delgado and Singida.

6.7. Summary

83. There are three characteristics of schools that are consistently significant across all four studies in their association with student results. First, Whether and how well the head teacher communicates with the community and provides oversight and support to the school's teachers has a significant influence on how seriously education and students' results are taken. Second, the teachers' planning and their evaluations of students contribute directly to how well students do. And, third, when the community gives the school significant material support and parents make sure their children have family support to go to school the better the students' results should be. Equally interesting is the finding from these studies that external supervision, learning materials (especially textbooks), and the school's infrastructure are not as strongly associated with students' results as the other characteristics. The researchers had expected that they would find that Sub-Saharan Africa's success in providing learning materials and school buildings and strengthening supervision would be contributing more to student learning.

84. This said, the studies' results also require some explanation that limit how much they may be generalized. First, across the studies the relationship of the school head to the community and the communities' contributions beyond material inputs were not studied as carefully as they could have been. In fact, there was a tendency for the researchers to realize only during the analysis that the community played a larger role than they had appreciated before they selected the characteristics to study. Perhaps this research experience has helped these educators appreciate more the role that the community plays in improving a school's quality. Second, the great uniformity among teachers in how they teach made it difficult to tease out the contribution of teaching/learning methods to students' results. Probably, all the teams finished their analysis with the feeling that if they had found the differences in methods that they thought teachers were using, they would have also found more varied and richer teaching methods in the better schools. Third, since all of the researchers have management and supervision roles in their education systems they only reluctantly accepted the conclusion in each study that external supervision's contribution to student learning is very limited. Every group grappled with this conclusion, trying to explain it. Reasons they came up with included insufficient manpower and resources for travel, the inaccessibility of many schools, lack of skills and motivation by supervisors, too broad a mandate of topics to supervise, and an almost complete lack of timely follow-up to whatever interventions are made. Despite weak support from the data, the Rwenzori and Toamasina studies included external supervision as one of the priority characteristics for follow-up. These studies both made recommendations that the researchers believe would improve the impact of external supervision on the schools' quality. In addition, the Singida team recommended that guidelines be prepared to clarify the roles, relationships, and linkages among regional stakeholders, including pedagogical support personnel.

85. Finally, and most significantly, all four studies' diagrams showing how school characteristics produce student results have classroom processes as the characteristic most directly influencing student results. In Uganda the characteristic is called "pupil participation", in Madagascar "prosédés d'enseignement et d'apprentissage", in Mozambique "participação activa dos alunos", and in Tanzania "the teacher motivates pupils for learning". Despite being unable to differentiate what teachers do with students and not finding much statistical support for an association between student outcomes, the researchers have stuck to this belief. They are sure that the methods they observed in almost 500 classes are not contributing what they should to learning outcomes and that different methods would improve learning. Perhaps this is the principle lesson from this study: what teachers and students do together in the classroom should be the focus of all interventions. If this conclusion is recognized as the starting point for planning, then interventions would be determined by deciding what antecedent priority characteristics and inputs will contribute the most to enriching the teaching and learning experience. And local educators are better placed than anyone else to decide which school characteristics should be a priority for their schools and what the details of the changes in them should be.

7. IMPLICATIONS FOR FUTURE ACTION

86. These studies in sub-regions of four Sub-Saharan Africa countries pose at least three questions worth discussing when governments decide on what to do to improve the quality of primary education. They are:

- What school characteristics in any given setting are key to improving learning environment for students and to producing better student learning?
- What strategies will best promote the selection of these priority characteristics and the design and implementation of activities to improve them?
- In what ways might research better inform these choices and the actions that will be taken?

In this chapter the consultants' who worked with the research teams share their responses to these three questions.

87. *Key school characteristics*: The last chapter pretty well gives away our answer to the first question. What goes on in the classroom is key, even though the studies do not fully support this focus. In the first instance, what goes on between teachers and learners is dependent on how seriously the school administration, usually an individual in Sub-Saharan Africa, is able to provide professional leadership in the school, first in ensuring that the teachers teach as well as they can and then that they continue to learn and change and second in ensuring that the community fully supports and is involved in the school and the education of their children. If the administration does this, teachers are more apt to plan well, to take chances in the classroom, to evaluate their students regularly, and to help students learn what they find difficult. For its part, the community will engage with the staff of the school and be involved in providing inputs – moral, material, and pedagogical – that sustain their children in school.

88. The studies also provoke a response to the observation that "school inputs have a diminishing rate of return" (Orivel, 2005). Have primary schools in Sub-Saharan Africa reached this point? Certainly not, but these studies show that inputs are much more available than they used to be, but that in the case of classroom materials and in-service training of teachers what exists is under-utilized. The amount of textbooks, teachers manuals, and learning materials found in the schools seemed adequate to help students learn, but they are not being used very effectively, and their presence and/or use do not seem to be associated with students' results. Half or more of the teachers in the sample schools have adequate education and some teacher training, and there has also been a significant amount of in-service teacher training. However, teaching methods do not vary much, and the training also does not seem to be very much associated with student results. The findings on school infrastructure, especially classrooms, was mixed. In Tanzania and Mozambique adequate facilities are a priority, but in Madagascar and Uganda there seemed to be less crowded schools and more successful local adaptations. Since Tanzania and Mozambique have the most crowded schools, it may be there they have crossed a threshold of crowdedness that does influence the teaching/learning processes significantly. Using the language of systems analysis, one is left with the impression that a greater focus on school processes such as head teachers interacting with teachers on pedagogy and teachers using more varied and richer methods of instruction may be necessary, even at some cost to continuing the emphasis on providing inputs that has characterized most education reforms.

89. These generalizations about what the four studies imply for actions elsewhere have to be taken for what they are, conclusions from four local studies in four different countries. The approach used sought to involve local educators in objectively reflecting on the realities of their schools. The

studies succeeded in this. One could expect that similar studies in other areas, even in the same countries, might have different results. For example, the lack of textbooks being significant in Uganda was found to be that they were in the schools but not given to the students regularly. In Tanzania and Madagascar which had similar levels of textbook availability, the books are passed out and used in most classes, but they are not used effectively. In a few cases the schools even let the students take the textbooks home. Other settings might have the same textbook availability but other problems with how they are used. So, caution should be shown in using these studies' conclusions on key characteristics to guide policy reform in other places, including their own Ministries of Education.

90. *Strategies*: As the introduction pointed out, most of the conditions that strategies to improve the quality of primary education need to incorporate were well-articulated at the last ADEA conference. The first is *a political commitment to act* : Governments, education personnel, and their partners should emphasis the focus on the classroom (on what teachers and learners do together with the support of the leader(s) in each school) in discussions, in public communications and in resource allocations. Second, in *selecting and sequencing priorities*, any plan or program and its elements should be assessed against the extent to which it has the potential to improve what goes on between teachers and students. The studies reported on here have provided the analysis for priorities in four different places. Third, in concert with the increased local authority and responsibility for primary education that is occurring in many countries, *capacity building* for improving quality has to focus on those closest to the schools. The Toamasina study's recommendation on strengthening "la supervision de proximité" is a good example of this kind of focus. Fourth, *public-private partnerships* will need to focus on the priority characteristics and on the strategies selected. At the regional and national levels, this requires a greater involvement of both public and private people from the sub-national and school levels in activities related to improving the quality of primary education. And, fifth, the local strategies and activities that will characterize the focus on teaching and learning must be based on evidence, both local and non-local, as those who are involved *learn from experience*. The methodology used by the research teams in the Rwenzori region, Toamasina Province, Cabo Delgado Province, and the Singida region provides an example of how evidence can be studied and reflected upon locally.

91. These studies suggest one more condition for improving the quality of primary education. If educational research is to contribute more to students' learning, it must *recognize potential understanding and expertise embodied in local experience*. However, the objectivist paradigm that drives almost all the research downplays the value of felt experience in defining reality. In this paradigm "reality" is out there and will be apprehended scientifically. Variables are identified, tests and questionnaires drafted and tested, and data is collected and analyzed quantitatively, usually by people with very little experience of the area and schools studied. The recommendations that stem from this approach are of necessity general, and national policy makers use them to enunciate national policies. This is helpful because it elucidates important areas for action. However, the profile provided lacks the rich detail needed to identify what to do in response to unique local circumstances. Only by putting the objective findings against experienced reality can effective actions be identified. The people best qualified to reflect on findings and complex realities are those who work in the area that was studied. But they have not been skilled enough, and have usually not been invited, to collect, process, and interpret information on their own; and they are usually not invited to decide what to do in response to conclusions that are supposed to help their students. The experience of these nearly sixty local educators demonstrates that the dominant research paradigm that emphasizes scientific objectivity can be adapted so that local educators' analytic potential and their extensive experience can be used to help students learn more.

92. *Research*: This principle author of this synthesis report admits to having instigated these studies, but I do not take responsibility for their completion and the importance of their findings. Instead, I am awed by and grateful for the capabilities and openness that these local educators have shown when they were forced to confront the realities they thought they knew well with real data that they had themselves collected. They responded effectively to the opportunity to look carefully at their schools and the people in them with new eyes, but that has been challenging. First, no one had ever

asked them before to carefully define the characteristics of an effective school, with indicators. Of course, everyone immediately agreed that a quality school must have "effective teachers", but it took time to agree on defined behaviors (the indicators) to study. Second, these former teachers and education managers were not used to looking at schools and what happens in them without thinking "what's wrong here." We had to keep reminding ourselves that for this work we were in the schools to record reality, not change it during our visits. Third, they had not had much practice thinking in terms of how characteristics relate to each other to produce learning (e.g., "If head teachers meaningfully check on teachers' preparations their supervision should influence teaching methods which will then influence student learning:"). Identifying and explaining these relationships, "the story line", of their conclusions was challenging, and the studies conclusions, with the accompanying diagrams of how priority characteristics relate to each other, provide evidence of how well they handled this challenge. And, finally, as we went along, some of them doubted that their inputs, the conclusions and recommendations reported here, would be of consequence to decision-makers. They were all used to receiving instructions about new curricula, regulations, forms, etc. They had not had much practice at objectively analyzing problems to define solutions that they could then implement. And their knowledge of how others have handled similar problems, even in their own countries, was limited. Consequently, when it came time to make recommendations the teams at first found it difficult to articulate much more than obvious and very general recommendations. In particular, the Uganda and Madagascar teams' detailed articulation of their recommendations show how well they have overcome this difficulty.

93. All of us who participated in these studies believe that the methodology that we've now implemented in four countries and three languages provides a good basis for how to develop local research and analysis skills. The development of analytic capacities among education practitioners is particularly important because it responds to an important shortcoming in the current expansion of decentralized authority and responsibility for primary education. So far, the international education community in Sub-Saharan Africa has recognized the need to allow local people to plan and implement educational reforms. There is good and varied experience with processes and documentation that produce district plans, school plans, and school improvement plans and that manage their implementation. As the studies we have completed found, the capacity to manage the implementation of new curricula and textbooks, in-service teacher training, school construction programs and the like is now fairly robust. However, there has not been an equivalent development of methods and skills that help local educators analyze and reflect on the issues they are called upon to plan and implement solutions for. Those of us who participated in producing these studies hope that we have provided an example of how this capacity may be built. We believe that the national reports and this synthesis paper provide evidence that there is untapped potential among local educators if governments take the time to elicit, facilitate, and respect these experienced local educators' potential as "reflective practitioners" (Schön, 1983), professionals who continually gather information as they work and reflect on it in deciding what to do to be more effective in their work.

94. *Conclusion*: The work of the sixty or so people who participated in these studies has taught us that our preconceptions about what characteristics of schools were most important for student learning needed revision, that research on the quality of education done locally is possible and eye-opening (and very hard work!), and that local educators are capable of doing much more objective analysis of the conditions affecting school quality than their governments have asked them to do. The cadre of research-practitioners created through this work encourages other countries to replicate the process that we have reported on to understand better what they can do to improve the quality of education in their schools.

Endnotes:

[1] Yule's Q = (a x d) – (b x c) ÷ (a x d) + (b x c) where:

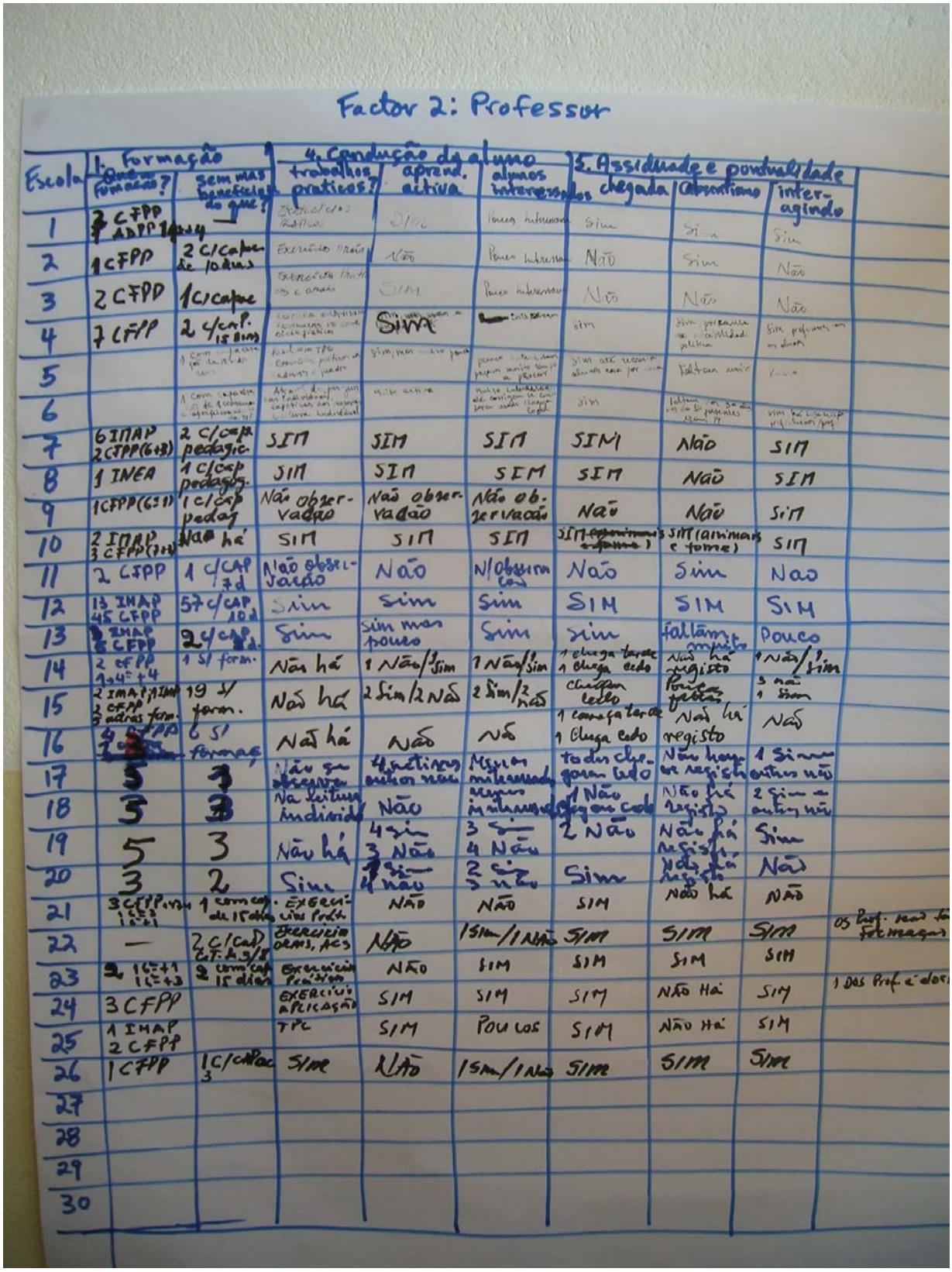
a	b	A+ b
c	d	C+ d
a+ c	b+ d	tota l

8. APPENDICES

8.1. Research Team Participants (by position)

Position	Madagascar	Mozambique	Tanzania	Uganda
Inspector	3 + 1 researcher	0	1	1
Pedagogical Supervisor	8	11	6	9
Teacher Trainers	2	3	2 curriculum coordinators	1
Primary School Heads	6	4	10	8
Total	20	18	19	19

8.2. An example of a data analysis chart



Factor 2: Professor

Escola	1. Formação: Quantos formação?	1. Formação: sem mais benefícios do que?	4. Condução do aluno: trabalhos práticos?	4. Condução do aluno: aprend. activa	4. Condução do aluno: alunos interessados	5. Assiduade e pontualidade: chegada	5. Assiduade e pontualidade: Absentismo	5. Assiduade e pontualidade: inter-agindo
1	3 CFPP 1 ADPP							
2	1 CFPP	2 C/capac. de 10 dias						
3	2 CFPP	1 C/capac						
4	7 CFPP	2 C/cap. 15 dias						
5								
6								
7	6 INAP 2 CFPP (6+3)	2 C/cap pedagóg.	SIM	SIM	SIM	SIM	Não	SIM
8	1 INEA	1 C/cap pedagóg.	SIM	SIM	SIM	SIM	Não	SIM
9	1 CFPP (C=1)	1 C/cap pedag	Não observação	Não observação	Não observação	Não	Não	Sim
10	2 INAP 3 CFPP (2+3)	Não há	SIM	SIM	SIM	SIM (animais e fome)	SIM (animais e fome)	SIM
11	2 CFPP	1 C/CAP 7d	Não observação	Não	N/Observação	Não	Sim	Não
12	13 INAP 45 CFPP	57 C/CAP 10d	Sim	Sim	Sim	SIM	SIM	SIM
13	3 INAP 8 CFPP	24 C/CAP 8d	Sim	Sim mas pouco	Sim	Sim	Faltam muito	Pouco
14	2 CFPP 1 2º+4	1 S/ form.	Não há	1 Não/1 Sim	1 Não/1 Sim	1 chega tarde 1 Chega cedo	Não há registo	1 Não/1 Sim
15	2 INAP 3 CFPP 3 outras form.	19 S/ form.	Não há	2 Sim/2 Não	2 Sim/2 não	Chegam cedo	Poucas faltas	3 não 1 Sim
16	4 CFPP 2 [illegible]	6 S/ formação	Não há	Não	Não	1 começa tarde 1 Chega cedo	Não há registo	Não
17	5	3	Não se observa	4 activos outros não	Muitos interessados alguns interessados	todos chegam cedo	Não houve registo	1 Sim outros não
18	5	3	Na leitura individ	Não	Muitos interessados	1 Não chega cedo	Não há registo	2 Sim e outros não
19	5	3	Não há	4 Sim 3 Não	3 Sim 4 Não	2 Não	Não há registo	Sim
20	3	2	Sim	4 Sim 1 Não	2 Sim 3 Não	Sim	Não há registo	Não
21	3 CFPP (1C=3 1C=1)	1 com cap. de 15 dias	EXERCÍCIOS	NÃO	NÃO	SIM	Não há	NÃO
22	—	2 C/cap C.T. A.S/E	EXERCÍCIOS OEMS, ACS	NÃO	1 Sim/1 Não	SIM	SIM	SIM
23	2 1C=+1 1C=+3	2 com cap 15 dias	Exercícios práticos	NÃO	SIM	SIM	SIM	SIM
24	3 CFPP		EXERCÍCIOS APLICAÇÃO	SIM	SIM	SIM	Não Há	SIM
25	1 INAP 2 CFPP		TPC	SIM	POUCOS	SIM	Não Há	SIM
26	1 CFPP	1 C/cap 3	SIM	Não	1 Sim/1 Não	SIM	SIM	SIM
27								
28								
29								
30								

8.3. Conceptual Frameworks and Summary Diagrams

8.3.1. Uganda

Factors, Characteristics and Indicators that influence pupil performance

Rwenzori Region, Uganda

***Factor*: Effective Teaching and Learning**

***Definition*:** Teaching (and learning) is considered effective when: 1. Pupils participate in learning activities. 2. All subjects are covered in an integrated manner in relation to the whole curriculum. 3. Pupils participate in co-curricular activities. 4. Classes are disciplined. 5. Relevant instructional materials are available and put into use. 6. Timetable is followed. 7. Reading and writing lessons are planned and taught. 8. The number of students taught by a teacher in a given space is manageable.	
Characteristics	***Indicators***
1. Pupils participation	a. Pupils respond to teachers' questions and instructions b. Progress chart displayed in class c. Pupils regularly do homework and assignments d. Records of continuous assessment are available e. Pupils present their work for marking f. Pupils participate regularly in practical work. g. Pupils are punctual and regular in attendance
2. Subject coverage	a. Teacher has schemes of work and lesson plans which are used in class b. Pupils' work displayed and other signs of "a talking classroom" with relevant subject coverage and updated c. Record of work seen marching with pupils activities in their exercise books and also in relation to syllabus coverage
3. Co-curricular activities	a. Pupils participation in co-curricular activities b. Sports equipment are available and being utilized c. Timetables showing games and sports periods d. Terms program showing co-curricular activities
4. Disciplined classes	a. All children in school uniform b. Smooth transition from one period to another c. Positive response to the teacher's instruction by pupils d. Availability of school rules and regulations and implementation
5. Instructional materials	a. Learning aids displayed and pupils able to answer questions about them

	b. Library records showing usage of textbooks by pupils and teachers c. Textbooks in the hands of pupils d. Evidence of textbook use in pupils' exercise books e. Condition of the textbooks f. Pupils are provided with basic scholastic materials
6. Timetable	a. Wall clocks and timetables in classrooms b. Timekeeper with a bell and teachers and pupils responding to it
7. Reading and Writing	a. Schools and class libraries being used b. Reading cards and work cards displayed in class c. Pupils being able to read and write d. Reading and writing timetabled e. Pupils' reading and writing work displayed
8. Manageable class size	a. Teacher/pupil ratios of 1:40 so that teacher caters for individual differences

***Factor*: Effective Teacher**

***Definition*:** A teacher is considered effective when he or she: 1. Has mastery of the content and methodology he/she is teaching. 2. Prepares what to teach. 3. Carries out timely assessment and evaluation of learning. 4. Makes and uses instructional materials appropriately. 5. Is a role model.	
Characteristics	***Indicators***
1. Content and Methodology	a. Ability to interpret the curriculum b. Adequate training (GIII, GV) (see personal files) c. Ability to deliver material accurately and fluently in English d. Uses appropriate and varied methods, e.g., discussions, dramatizations, role plays, group work e. Positive response of learners in class
2. Preparation	a. Schemes of work are with the teacher b. Lesson plans that cater for differences of learners c. Making and use of instructional materials
3. Assessment	a. Marks learners work (exercise books) and gives feedback b. Keeps progress records (e.g., cumulative records cards, class progress charts, etc.) c. Gives homework and assignments d. Gives feedback and conducts remedial classes
4. Resourcefulness with instructional materials	a. Models, puppets, wall-charts seen in class b. Educational corners (e.g., nature corner, shop corner, our forest, interest corner) c. Vocabulary tree; Abacus, flash cards d. Drawings, paintings, prints by learners
5. Role Model	a. Clean and decently dressed and b. Consistent in his/her duties c. Manages time (he/she is punctual) d. Adheres to the master timetable, class timetable, and personal timetable e. Good chalkboard handwriting f. A well-organized sitting arrangement of the class g. Controls and manages the class (learners respond to instructions) h. Assigns responsibilities to learners in the class (rota), e.g., sweeping class, carrying books from library

***Factor*: An Effective Head Teacher**

***Definition*:** A head teacher is effective when:

1. He or she communicates regularly and effectively with teachers, parents, the DEO's office and others in the community.
2. He/she monitors and supervises school activities
3. He/she is a role model.
4. He/she plans for the school.
5. He/she motivates staff and pupils.

Characteristics	***Indicators***
1. Regular and effective communication	a. Frequent and productive staff meetings with lists of resolutions and actions taken afterwards b. Minutes of meetings held c. Community mobilisation file and number of sessions held d. Teachers report collaboration with the head teacher
2. Monitors and supervises	a. Approves teachers' schemes of work and lesson plans b. Hold pre-conferences, visits classrooms to assess the teaching learning process and consistency of lesson preparation and holds post conferences with teachers c. Holds regular staff meetings d. Carries out regular staff performance appraisal e. Checks on the teachers' topical coverage on the schemes of work and syllabi f. Follows up the planned pupil activities in the pupils' exercise books g. Carries out practical teaching
3. Role Model	a. Decently dressed b. Organised office: filing system, display of important information c. School buildings and grounds are maintained attractively and water is available d. Displayed school rules and regulations e. Consistent in his duty, especially in his/her attendance f. Manages time well g. Adheres to the master timetable, class timetable, and personal timetable.
4. Plans for the school and keeps school records	a. General Work Plan for the school displayed (budgets) b. Minutes of planning meetings with stakeholders c. List of teachers' responsibilities d. Progress reports on the plans made e. Attendance lists for the planning committee members f. Availability of a general school timetable g. Keeps school records, e.g., financial, teacher and pupils' records, store and library records
5. Motivates staff and pupils	a. Organises refresher courses for staff b. Delegates duties c. Regular appraisal of staff d. Organises exchange visits e. Team work f. Provides lunch for staff g. Guides and counsels teachers and pupils

***Factor*: Monitoring and Supervision**

***Definition*:** Monitoring and Supervision is effective when: 1. The head teacher supervises teachers 2. External supervisors make regular visits to schools and give guidance and counselling services to the head teachers and teachers on classroom instruction and other activities in the school.	
Characteristics	***Indicators***
1. Head Teacher supervises	See "monitoring and supervision" under the Head Teacher Factor
2. External Supervision	a. Both Inspectors and CCTs make frequent/regular visits to a school b. Ensure school work plan is available and give relevant advice c. Give advice on use and storage of instructional materials d. Carry out needs assessment and recommend relevant remedies e. Check on records management to ensure availability of: financial records, attendance registers, teachers' personal files, pupils' progress records f. Give advice on good sanitary practices in the school and ensure availability of water supply, bathrooms for girls, enough latrine stances for both sexes, neat compound with flower gardens g. Give advice on discipline in the school h. Observe classroom instruction and provide feedback to the teacher i. Organise refresher courses for head teachers and teachers j. Guides and counsels head teacher and teachers

***Factor*: Physical Environment**

***Definition*:** The infrastructure of a school will enhance the effectiveness of a school when:

1. The school owns the land.
2. There are structures, which are well maintained and repaired.
3. Enough classrooms are constructed to accommodate the enrolment.
4. All teachers are accommodated at/near the school premises.
5. There are other furnished structures, e.g., head teacher's office, staff room, book store/library.
6. There are adequate sanitary facilities: water, toilets, washing rooms

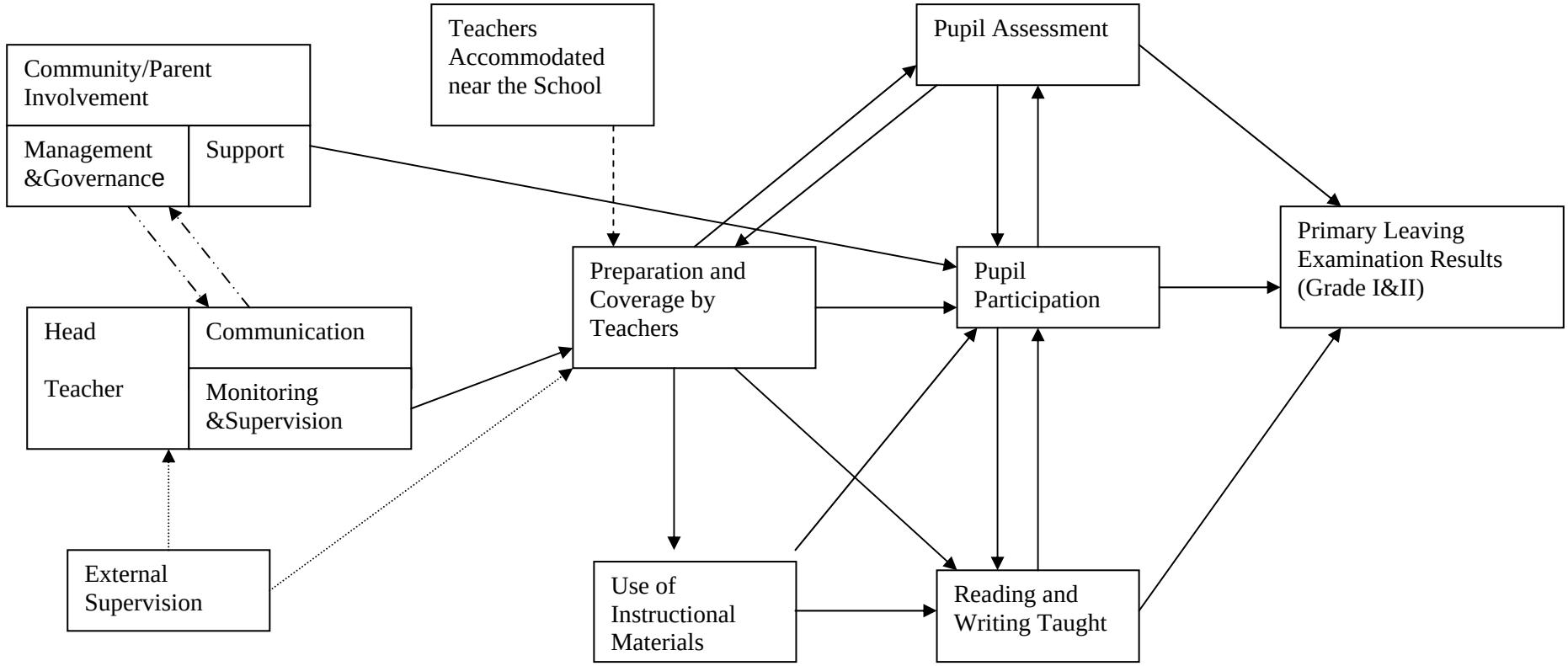
Characteristics	***Indicators***
1. Landownership	a. Land title b. Clearly demarcated
2. Well-maintained Structures	a. Well maintained classrooms with: iron roofs, firm painted walls, concrete/cemented floors, lockable shutters
3. Classrooms	a. One classroom per class/stream b. Pupils accommodated in each classroom comfortably c. Classes constructed in: permanent materials d. Classrooms have shutters e. Furniture: Desk/pupil ratio enough to seat pupils comfortably f. Teachers have a chair and a table in the classroom
4. Teachers' accommodation	a. Teachers accommodated at/near the school b. Enough rooms per house
5. Other Structures: A. Head Teacher's Office	a. A sizable room to accommodate important school records/assets to be easily accessed b. Furniture: office table, chair, chairs, cupboards, and pin boards
B. Staff Room	a. At least the size of a classroom with adequate sitting/writing facilities b. Well-ventilated and lockable c. Furniture: same as office with table & chair for every teacher
C. Store/Library	a. Strong iron roof and firm walls b. Well-ventilated and lockable c. Furniture: Chairs, tables, shelves, cupboards, pin boards
6. Adequate sanitary Facilities: a. Water	a. Clean, safe water supply within at least 500 m. of the school b. Save water sources, e.g., gravity flow scheme, water tanks, boreholes, etc.
b. Toilets	a. Built of permanent materials b. Toilets and stances according to GOU regulations, including accessibility for special needs pupils c. Separate for girls, boys, and staff d. Well-ventilated (e.g. VIPs) and with shutters e. Hand washing facilities
c. Washing rooms	a. Built in secure premises for privacy b. Shutters and proper drainage

***Factor*: Community Involvement**

***Definition*:** Community involvement is effective when: 1. The community provides financial and material support for the school's operation. 2. There is frequent communication between school and community. 3. The community is involved in the school management and governance. 4. The children come to school healthy, and meals are provided. 5. The community provides resource persons in the teaching learning process.	
Characteristics	***Indicators***
1. Financial and material support	a. Contributions in finance or in-kind (e.g., building materials and land are evident) b. Building constructed and site preparation evident c. Parents/guardians provide pupils with basic scholastic materials
2. Frequent communication between school and community	a. School-public events are attended by the community, i.e., open days, speech days and Education week (attendance lists and visitors books could be seen) b. Joint school-community meetings, e.g., LCS, church meeting evidenced by records of minutes and visitors books
3. Community role in management and governance	a. The committees meet frequently and make constructive resolutions, e.g., joint PTA and SMC meetings evidenced by records of minutes, attendance lists and visitors books. b. SMC and PTA monitor policy implementation. c. SMC approves plans and budgets of the school.
4. Children come to school healthy	a. Hunger, malnutrition and illness signs are not evident b. High enrolment and regular pupil attendance is evidence by the school register c. Mid-day meals are provided by parents/guardians
5. Community as resource persons	a. The community's monitoring and support of the idea of pupils' homework is evident in the pupils exercise books where they sign b. The community provides teachers and other informed personalities who serve as information sources (evidence could be found in the school log books, visitors book, and school weekly reports) c. Community members visit the school and check on the child's attendance and class work as evidenced by the visitors book

THE RELATIONSHIP AMONG CHARACTERISTICSTHAT INFLUENCE PRIMARY SCHOOL LEAVING EXAMINATION RESULTS

IN FIVE RWENZORI DISTRICTS OF UGANDA



Key: variegated line = not studied but may be important
Dotted line = studied but no significant association found

8.3.2. Madagascar

Les Facteurs, les Caractéristiques, et les Indicateurs de la Qualité de l'Education Primaire au Province de Toamasina, Madagascar

***Facteur* : 1. Directeur efficace**

Définition : Le directeur est efficace lorsqu'il assume correctement :

1. Ses tâches pédagogiques
2. Ses tâches administratives
3. Ses tâches relationnelles

Caractéristiques	*Indicateurs*
1. Ses tâches pédagogiques	a. Il contrôle et vise les outils de travail de l'enseignant (journal, répartition, cahier de roulement, registre d'appel, emploi du temps des élèves, les fiches pédagogiques) b. II préside les conseils des maîtres axés principalement sur l'amélioration des pratiques de classe. c. IL encadre les enseignants : • Il soutient techniquement et moralement ses enseignants et les encourage pour l'apprentissage de leur métier • Il vérifie l'application des acquis de formation par des observations de classe (inopinées et/ou à la demande).
2. Ses tâches administratives	a. Il contrôle la présence des enseignants. b. Il vérifie la sortie des matériels dans le cahier de prêt c. Il contrôle et vise les bulletins de note des élèves d. Il élabore et met en œuvre un projet d'école pédagogique ou non e. Il transmet les instructions officielles et veille à leur application f. Il classe les archives par année scolaire et les conserve en lieu sûr g. Il dresse le bilan de chaque bimestre, de l'année écoulée (succès, faiblesse) et prend les dispositions nécessaires à l'amélioration
3. Ses tâches relationnelles	a. Il identifie et résout les problèmes de ses enseignants, des élèves et des classes b. Il entretient des contacts fréquents avec les partenaires de l'école (FRAM, FAF, autorités, ONG).

***Facteur* : 2. Soutien de la communauté et des partenaires**

Définition : Le soutien des parents, partenaires, et de la communauté est efficace lorsque :

1. Les parents et la communauté contribuent et apportent un soutien matériel et financier á l'école
2. Les échanges entre la communauté, les partenaires et les personnels de l'école sont fréquents
3. La communauté intervient utilement dans l'enseignement

Caractéristiques	*Indicateurs*
1. Contribution et soutien matériel et financier	a. La communauté et les partenaires fournissent de la main d'œuvre et/ou des fonds pour l'aménagement, la réhabilitation et/ou la construction. b. Ils se cotisent et/ou organisent des activités lucratives pour : • la rémunération des enseignants FRAM, • les primes des meilleurs élèves c. Ils mettent en place un comité de recensement des enfants scolarisables et fait appel à l'officier d'état civil pour l'obtention de la copie de l'acte d'état civil.
2. Les échanges fréquents	a. La communauté et les partenaires se réunissent fréquemment pour prendre les décisions relatives au soutien matériel et financier de l'école. b. Le Maire demande auprès des chefs d'établissement les besoins en vue des subventions.
3. Participation de la communauté dans l'enseignement	a. Le Maire réunit les conseillers communaux pour délibérer sur le montant ou la nature des subventions à allouer aux établissements scolaires. b. Chaque FKL met en place un « DINA » qui sanctionne les parents qui n'envoient pas leurs enfants à l'école ou dont les enfants abandonnent c. Le Maire approuve ces « DINA » et veille à son application d. Le bureau de la FRAM participe à la sélection des candidats maîtres FRAM

***Facteur* : *3.* La Supervision**

Définition : La supervision favorise l'efficacité de l'école si :

1. Le Directeur accomplit ses attributions.
2. Les responsables pédagogiques (Inspecteurs, Chef ZAP, Chef CISCO, Conseillers Pédagogiques, Assistants Pédagogiques) effectuent les différentes tâches d'encadrement.

Caractéristiques	*Indicateurs*
1. Réalisation des attributions par le Directeur	*Voir tâches pédagogiques du directeur efficace.*
2. Visite d'école/classes par les responsables pédagogiques	a. Les visites sont fréquentes. b. Pendant les visites sur terrain, les responsables pédagogiques : • observent les pratiques de classe. • contrôlent les affichages obligatoires des enseignants (liste nominative, emploi du temps, répartition, pyramide des âges, tableau de chants et de récitations). • s'entretiennent avec les enseignants ou le Directeur. • donnent le feed-back.

Facteur : **4. Le processus d'enseignement et d'apprentissage efficace**

Définition : Le processus d'enseignement et d'apprentissage est efficace si :

1. Les procédés d'enseignement sont variés.
2. Les élèves participent activement à la leçon.
3. Les devoirs à domicile sont fréquents, donnés plus d'une fois par semaine à partir de la 3ème année.
4. L'enseignant respecte la planification des apprentissages.
5. L'évaluation est fréquente et suivie de feed-back.

Caractéristiques	*Indicateurs*
1. Procédés d'enseignement	a. Les enseignants utilisent divers procédés d'enseignement : les travaux individuels, les discussions en classe, les travaux de groupes, les explications, les séances de questions/réponses et l'encadrement des élèves faibles par les forts.
2. Les élèves participent activement à la leçon	a. Les élèves écoutent attentivement les explications et les consignes et y réagissent : - Ils posent des questions à l'enseignant ou à ses camarades pour avoir plus d'éclaircissement ; - Ils répondent aux questions ; - Ils discutent entre eux ; - Ils exécutent les consignes ; - Ils utilisent les manuels et les matériels didactiques mis à leur disposition ; - Ils participent à l'élaboration des résumés de leur leçons (résumé - schéma).
3. Devoirs à domicile	a. Les enseignants donnent des devoirs de maison (application ou remédiation). b. Les devoirs de maison sont contrôlés (par l'enseignant ou le chef de groupe). c. Les enseignants font une correction collective et commentent les devoirs. d. Les enseignants procèdent aux remédiations.
4. Respect de la planification des apprentissages	a. Le temps imparti aux différentes disciplines et thèmes prévus est respecté par les enseignants. b. Les élèves exécutent les exercices et devoirs dans les temps impartis.
5. Evaluation fréquente	a. Les évaluations sont périodiques et adaptées au niveau de classe. b. Les évaluations se font sous forme d'examen, d'interrogations écrites et orales c. Les enseignants procèdent à des évaluations d'orientation en début d'année scolaire de manière à l'utiliser

***Facteur* : 5. Soutien Matériel**

Définition : Une école bénéficie d'un soutien matériel effectif si :

1. les élèves ont suffisamment de manuel et des fournitures scolaires,
2. les matériels didactiques sont mis à la disposition de la classe,
3. les matériels et manuels sont bien rangés.

Caractéristiques	*Indicateurs*
1. Existence d'un nombre suffisant de manuel élève par discipline et de fournitures scolaires	a. Chaque élève dispose en classe de manuels par discipline. b. Les élèves peuvent amener leurs manuels à la maison. c. Les élèves ont avec eux des cahiers, une ardoise et de quoi écrire.
2. Existence de matériel et support didactiques mis à la disposition de l'enseignant	a. L'école possède une balance, un globe terrestre, des cartes, des planches pédagogiques, des manuels, et des guides pour chaque discipline.
3. Existence d'une armoire de rangement	a. La salle de classe est équipée d'une armoire de rangement et les matériels sont bien rangés

***Facteur* : 6. Enseignant efficace**

Définition : Un enseignant est efficace si

1. Il a reçu une formation académique et professionnelle
2. Il met en œuvre les acquis de formation
3. Il planifie les apprentissages
4. Il possède des fournitures et matériels
5. Il fabrique des matériels didactiques
6. Il respecte les obligations
7. Il respecte les fiches de préparation
8. Il a la qualité de voix requise
9. Les élèves participent activement à la leçon

Caractéristiques	*Indicateurs*
1. Formation académique et pédagogique	a. Les enseignants ont au moins le BEPC ou le CFEPCES b. Les enseignants ont au moins le CAE/EP
2. Mise en œuvre des acquis de formation	a. Il fait preuve d'une bonne maîtrise de la discipline qu'il enseigne. b. Il est capable d'utiliser et de diversifier les méthodes et procédés pédagogiques. c. Il a enseigné le même cours pendant plusieurs années successives
3. Elaboration d'un planification des apprentissages	a. Il planifie son enseignement apprentissage en tenant compte des calendriers scolaires et des programmes en vigueur. b. Il planifie les thèmes à traiter conformément au temps d'enseignement disponible en fonction du calendrier civil et des jours chômés. *c.* Il planifie les compositions et examens.
4. Fournitures et matériels	*Voir liste dans 5.2.a : Existence de matériel et support didactiques mis à la disposition de l'enseignant.*
5. Fabrication de matériels didactiques	a. Les enseignants fabriquent des matériels didactiques nécessaires. b. Ils sont utilisés par les enseignants et les élèves au cours des apprentissages.
6. respect de l'obligation	a. Il prépare ses leçons b. Il met à jour son cahier journal. c. Il corrige les devoirs et remédie aux erreurs des élèves.
7. Respect de la fiche de préparation	a. L'enseignant respecte les différentes étapes de l'enseignement apprentissage mentionnées dans sa fiche.
8. Qualité de la voix	a. L'enseignant parle suffisamment fort et clair avec un bon débit.
9. Les élèvent participent activement à la leçon	*Voir les indicateurs 4.2.a: Les élèves participent activement à la leçon.*

***Facteur* : 7. Infrastructure**

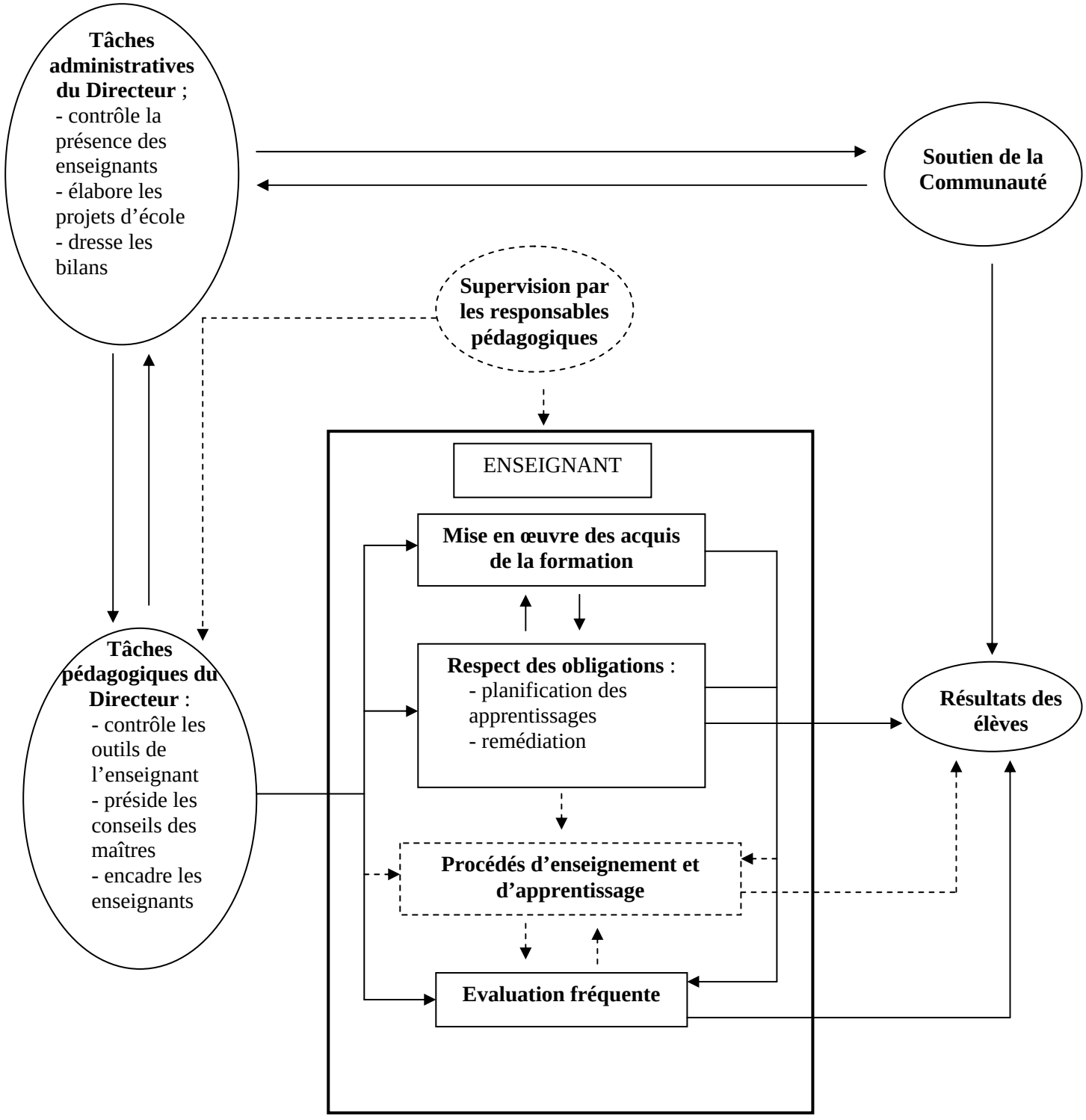
Définition : L'infrastructure de l'établissement est propice à la réussite de l'enseignement / apprentissage lorsque :

1. L'école dispose de toutes les dépendances nécessaires.
2. Les salles de classe sont bien équipées.

Caractéristiques	*Indicateurs*
1. Les dépendances nécessaires	a. L'école dispose de : - Salles de classe non bondées - Bureaux - Bibliothèque - Terrain de sport - Abri b. Le domaine scolaire est clôturé. c. Le logement des enseignements est implanté dans le domaine scolaire. d. L'établissement possède des latrines et des fosses à ordures. e. Les parterres fleuris sont entretenus par les élèves. f. L'école dispose de point d'eau. g. La cour est spacieuse et propre.
2. Les salles de classe équipées.	a. Il y a des tableaux noirs en bon état et de grandes ardoises pour les travaux de groupe. b. Il y a des tables bancs avec autant de places assises que d'élèves. c. Les salles de classe sont adaptées à l'effectif des élèves.

Les liens entre les caractéristiques prioritaires et leurs relations avec les résultats des élèves

Province de Toamasina, Madagascar



Légende : ⟶ = Relation trouvée dans l'étude

⇢ = Relation non trouvée dans l'étude

8.3.3. Mozambique

Factores, Características, e Indicadores de Qualidade em Escolas de Cabo Delgado

***Factor 1*: Direcção da Escola**

Definição: A direcção de Escola é eficaz quando: 1- Coordena as actividades, cria mecanismos de informação e comunicação e promove a colaboração com a comunidade; 2- Acompanha e apoia permanentemente todos os sectores da escola; 3- Avalia as actividades da escola 4- Participa na dosificação e planificação das aulas 5- Elabora e cumpre com o seu plano de actividades	
Características	**Indicadores**
1. Coordenação, promoção da colaboração e estabelecimento de um sistema de comunicação	a) Tem um espaço onde as principais informaçõe s são divulgadas (quadro, vitrina concetração) b) Tem actas de reuniões regulares do colectivo de Direcção, com os professores, conselho da escola e assembleia geral na pasta
2. Acompanhamento e apoio	a) Tem um plano de assistência às aulas e mostra fichas das aulas assistidas; b) Tem uma pasta com documento normativos c) Tem um plano de capacitação pedagógica dos professores e apresenta os relatórios das capacitações. d) Tem um plano de gestão dos recursos humanos materiais e financeiros e apresenta relatórios de cumprimento; e) Supervisiona a dosificação de programas, planificação e assistência de aulas f) Identifica e soluciona as dificuldades dos alunos, turmas e professores; g) A escola dispõe de um calendário de avaliação; h) Existe um sistem de registo sistemático do prgresso dos alunos i) Controla a assiduidade e pontualidade dos professores.
3. Avaliação do processo de ensino-aprendizagem	a) Tem exemplares dos testes realizados na pasta; b) Verifica e assina as pauta e os livros da turma;
4. Dosificação e planificação das aulas	a) Tem a dosificação dos programas de ensino na pasta; b) Tem exemplares da planificação temática nas pastas
5. Elaboração e cumprimento do plano de actividades	Anota no plano observações sobre o seu cumprimento.

***Factor 2*: Professor**

Definição: O professor na escola contribui para o bom resultados dos alunos quando: 1. Tem formação psico-pedagógica ou não mas beneficiou de, pelo menos, uma capacitação 2. Domina os conteúdos dos programas de ensino; 3. Aplica os conhecimentos adquiridos ao longo do processo de trabalho; 4. Conduz o aluno para a aprendizagem 5. É assíduo e pontual	
Características	**Indicadores**
1. Formação psico-pedagógica	a) Foi formado no CFPP, IMAP ou noutra instituição; b) Sem formação mas beneficiou de, pelo menos, uma capacitação pedagógica.
2. Domínio dos conteúdos de ensino	a) Lecciona de acordo com a sequência lógica dos temas no programa; b) verifica o nível de assimilação dos seus alunos através de perguntas orais ou escritas; c) comete poucos erros científicos
3. Aplicação das experiências	a) Utiliza conhecimentos acumulados, não se limitando apenas nas informações que vêm no livro do aluno; b) Professores fazem uma planificação conjunta e trocam experiências; c) Aplica vários métodos nas suas aulas; d) Diversifica o material concretizador; e) Produz o seu material didáctico
4 Condução do aluno para aprendizagem	a) Exercita os alunos dando-lhes trabalhos práticos individualmente e ou em grupo. b) Orienta os seus alunos para a uma aprendizagem activa c) Os alunos acompanha as aulas com interesse
5. Assiduidade e pontualidade	a) O professor chega sempre a tempo b) Há baixo absentismo (poucas faltas) c) Usa a maior parte do tempo disponível interagindo com alunos;

***Factor 3*: Materiais**

Definição: O material de apoio para uma escola é adequado quando: 1. Os alunos dispõem de quantidade suficiente de material básico escolar 2. Os professores dispõem de manuais que orientam a leccinação eficaz das aulas; 3. As salas dispõem de quadro, giz e carteiras suficientes para todos, material visual e de apoio;	
Características	**Indicadores**
1. Materiais para os alunos	Todos os alunos têm cadernos, lápis, borracha, esferográfica, régua e livros de cada disciplina.
2. Materiais do professor	Todos os professores têm manuais, livro do aluno das disciplinas e classe que leccionam
3. Material para a sala de aula	Quadro, giz, carteiras, mapas temáticos, globos, sólidos geométricos, réguas, compassos, transferidores.

***Factor 4*: As aulas**

Definição: Aa aulas são eficazes quando: 1. O professor conhece o conteúdo dos programas e manuais de ensino; 2. O aluno partcipa activamente nas aulas; 3. O professor respeita os passos da aula e o tempo. 4. O professor selecciona os materiais e métodos de ensino a serem usados de acordo com os conteúdos; 5. O professor usa convenientemente o material didáctico disponível.	
Características	**Indicadores**
1. Domínio dos programas e manuais de ensino	d) Lida com os programas e com os manuais de ensino sem dificuldades; a) Interliga os temas do plano com os conteúdos dos programas e manuais; b) Distingue os objectivos gerais dos específicos; c) Adequa o material didáctico com os conteúdos dos programas e dos manuais; d) Usa material didáctico apropriado
2. Participação activa dos alunos	a) O ensino é centrdo no aluno; b) Os alunos demonstram capacidades e habilidades aprendidas durante a aula: - lêm e interpretam textos; - efectuam cálculos; - fazem redacções; - fazem perguntas sobre o conteúdo dado; c) Os alunos respondem às perguntas do professor durante a aula; d) Realizam correctamente os exercícios práticos e teóricos; e) % dos slunos em situaçao positivas
4. Respeito aos passos da aula e ao tempo	O professor faz a introdução, desenvolvimento e consolidação dos conteúdos dentro do tempo previsto
5. Selecção dos métodos e materiais de acordo com osconteúdos	a) Os conteúdos constantes dos programas de ensino e estão dosificados; b) Na aulas os conteúdos são transmitidos no tempo previsto; c) Na planificação indica o método predominante e os métodos auxiliares de acordo com o conteúdo
5. Uso do material didáctico existente	a) Os materiais, tanto os fornecidos como os preparados a nível local estão disponíveis e são usados. b) Dá exemplos usando materiais didácticos como, mapas globos terrestres, sólidos geométricos, etc.

***Factor 5*: Comunidade**

Definição: A comunidade dá apoio eficaz quando: 1. Conhece a importância da escola; 2. Participa nas actividades da escola; 3. Assegura um ambiente calmo ao redor da escola	
Características	**Indicadores**
1. Conhecer a importância da escola	a) Maior número de crianças na escola b) Menor índice de desistências
2. Participação nas actividades da escola	a) Plano e relatórios de actividades do conselho de escola; b) Actividades realizadas pela comunidade na escola: • Construção de salas de aula; • Costrução de casas para professores; • Construção de latrinas; • Propostas de conteúdos do Currículo Local, etc; c) Actas de reuniões da escola com a comunidade..
3. Protecção do ambiente que circunda a escola	Ambiente calmo em redor da escola e as aulas decorrem normalmente

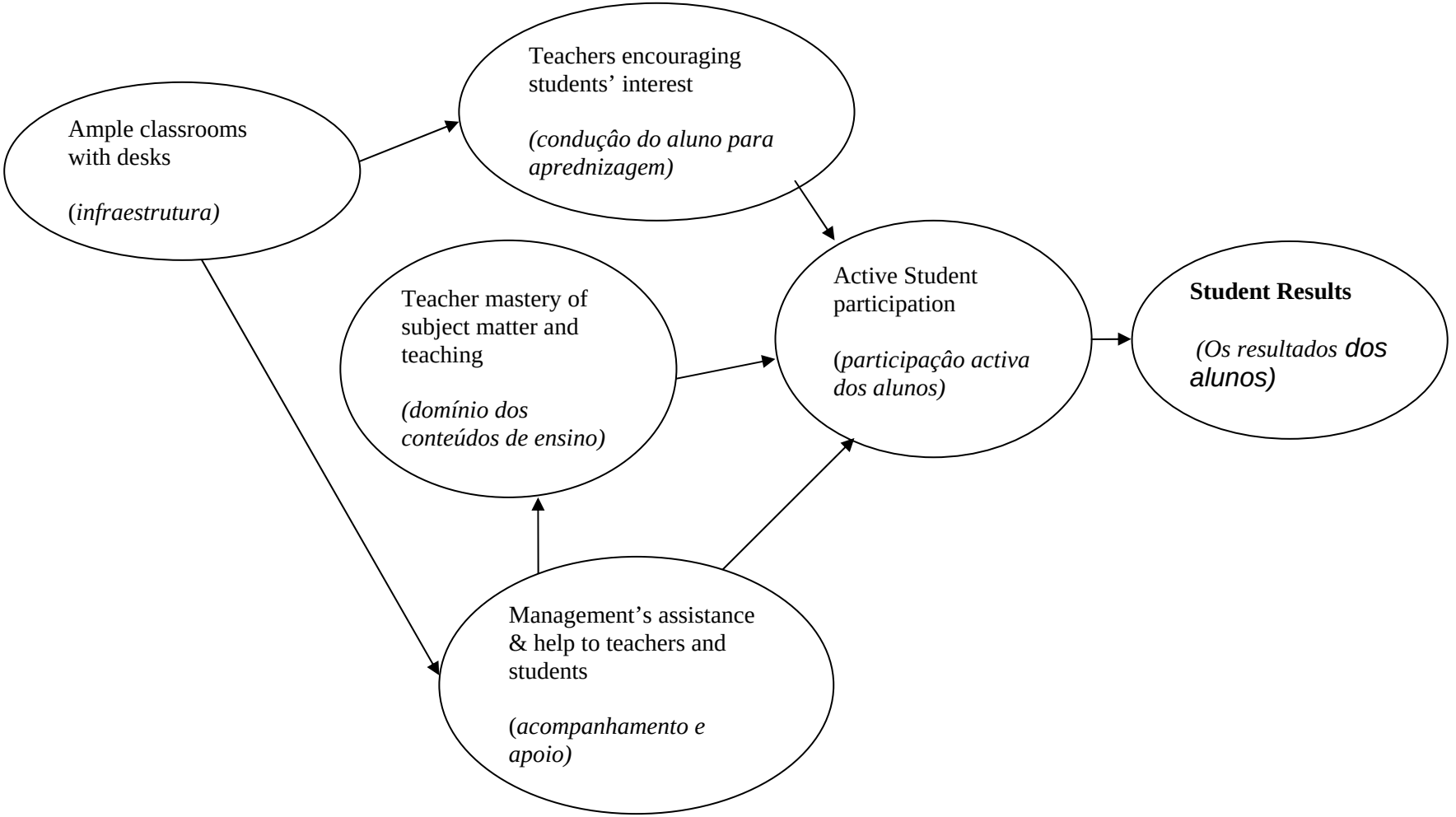
***Factor 6*: Ambiente interno**

Definição: O ambiente interno contribui para o resultado do aluno quando: 1. O colectivo de direcção da escola é coeso, competente e comunicativo; 2. A direcção tem boas relações com os professores, alunos e toda a comunidade escolar; 3. Há incentivos; 4. Há cumprimento de normas.	
Características	**Indicadores**
1. Colectivo de direcção coeso, competente e comunicativo	a) Toma decisões em comum e responsabilidade individual e colectiva
2. Boas relações de trabalho entre a direcção e outros intervenientes	a) Existe abertura, compreensão, entendimento e colaboração entre todas as partes;
3. Incentivos	a) Há reconhecimento pelo trabalho (bom) realizado.
4. Cumprimento das normas estabelecidas	a) Há interpretação clara e cumprimento dos planos da escola e seu regulamento interno; b) Há objectivos e metas a atingir

***Factor 7*: Infraestruturas**

Definição: As infraestuturas contribuem para o bom resultados dos alunos quando: 1. São construídas junto das populações e têm perto uma fonte de água potável; 2. Equipadas de mobiliário adequado; 3. Há manutenção dos edificios	
Características	**Indicadores**
1. Construção de escolas junto das populações	a) Construção de secolas em zonas onde a maioria dos alunos vive perto
Qualidade das construções	a) Construidas salas de aula amplas, equipadas, espaçosas e com boa visibilidade; b) Existência de infraestruturas de apoio, por esxemplo, casas de banho, latrinas, gabinetes de trabalho, bibliotecas, espaços para prática de actividades desportivas, fonte de agua, etc
	Tipos de salas de aula (material convencional, misto, procário ou sombras de árvores)
2. Equipamento das salas de aula	Todas as salas possuem carteiras em número suficiente para o os alunos.
3. Manutenção dos edifícios e equipamentos	Existe uma verba para a manutenção dos edifícios e equipamentos

Relationships among priority characteristics of primary schools in Cabo Delgado Province, Mozambique



8.3.4. Tanzania

Factors, Characteristics and Indicators that influence pupil performance

Singida Region, Tanzania

***Factor*: An effective and competent teacher**

Definition: An is teacher is considered effective and competent when: 1. Has mastery of the content and methodology he/she is teaching 2. Carries out timely assessments and evaluation of learning 3. Motivates pupils for effective learning 4. He or she is a role model 5. Enables pupils to applying knowledge and skills 6. Puts into consideration gender and individual needs and differences while teaching	
Characteristic	*Indicator*
Has mastery of the content and methodology he/she is teaching	(a) Ability to interpret the curriculum (b) At least he/she has completed Grade III A (c) Ability to deliver materials accurately (d) Uses participatory method e.g. discussion. (e) Uses instructional materials effectively
Carries out timely and effective assessments and evaluation of learning	(a) Prepares and gives appropriate class exercises, homework and tests (b) Marks pupils' work and give feedback on time.
Motivates pupils for effective learning	(a) Organize study visits (b) Rewards pupils appropriately (c) Uses pupils made materials and ideas in teaching and learning process (d) Uses pupil friendly language
He/she is a role model	(a) Manages well the class (b) Clean and well dressed (c) Regular and Punctual
Enables pupils to applying knowledge and skills	(a) Teacher encourages pupils to develop independence and take their own responsibilities (b) Pupils show high degree of involvement and initiative (c) Teaching methods encourage problem solving and creativity (d) Constructive use of textbooks and supplementary books

Consideration of gender and individual needs and differences	(a) The teacher distributes class activities to both boys and girls (b) The teacher uses girl and boy friendly language (c) Teacher has initiatives to address gender and individual needs/differences

***Factor*: Effective School Administration**

Definition: School administration is considered to be effective when:

1. There is regular and effective horizontal and vertical communication
2. There is effective monitoring, and supervision of school activities
3. The head teacher is a role model
4. There is motivation of teaching staff, supporting staff and pupils

Characteristic	*Indicators*
There is regular and effective horizontal and vertical communication	(a) Holding monthly staff meetings (b) Measures taken in response to monthly staff meetings' resolutions (c) Holding quarterly school committee meetings (d) School Baraza sessions (e) Parents/community meetings held and their resolutions (f) Copies of letters sent and received from higher authorities, communities and parents
There is effective monitoring, and supervision of school activities	(a) Checks and endorses teachers' schemes of work and lesson plans (b) Provide feed back to teachers (c) Follows up pupils' performance (d) Availability of an up to date subject logbook (e) Mechanism in place for teachers' performance appraisal (f) Mechanism in place for school committee to check on the performance of school activities
The head is a role model	(a) Display of important information and having a proper filing system (b) Analyses school level information for decision making (c) Displays schools rules and regulations (d) Punctual and regular at school (e) Consistence in his/her duty (f) Engages in Classroom teaching (g) Clean and well dressed
Motives teaching staff, supporting staff as well as pupils	(a) Provision of lunch/tea for staff (b) Feeding programmes for pupils (c) Delegation of power (d) Existence of subject committees (e) Organises and allows staff to attend in-service courses and workshops (f) Rewards pupils and staff

***Factor*: Effective Financial and Material Support**

Definition: Financial and material support is considered effective when: 1. The funds from the Central and Local government are timely released to schools 2. There is financial and material support from other stakeholders 3. School administration is capable of utilizing fund effectively.	
Characteristic	*Indicator*
Funds from the Central and Local government timely released	(a) Date when monthly and quarterly bank statement arrive at school (b) Records of capitation grant and development grant (c) When school finance records are submitted on time
There is financial and material support from other stakeholders	(a) Types and sources of support
School administration is capable of utilizing fund effectively	(a) Functional school finance committee (b) Availability of well kept files of school financial documents (c) Proper management of school materials and equipment (d) Enough and quality school building (e) Adequate material for teaching and learning

***Factor*: Professional Support and School Supervision**

Definition: Professional support and School supervision is considered effective when: 1. There is regular and effective external supervision 2. Effective professional Support	
Characteristic	*Indicator*
Regular and effective external supervision	(a) Supervisors make regular and focused visits to school (b) External supervisors discuss and give feedback and advice on school's whole plan (c) There is mutual relationship between teachers, supervisors and the Head teacher (d) Implementation of supervisor's recommendations
Effective professional Support	(a) DEOs/TC/TRCs organize in-service training and seminars for the school (b) There is coordination and regular follow up in schools (c) DEOs/TC/TRCs organize the implementation of the Teachers' up-grading programmes

Factor: ***Community involvement***

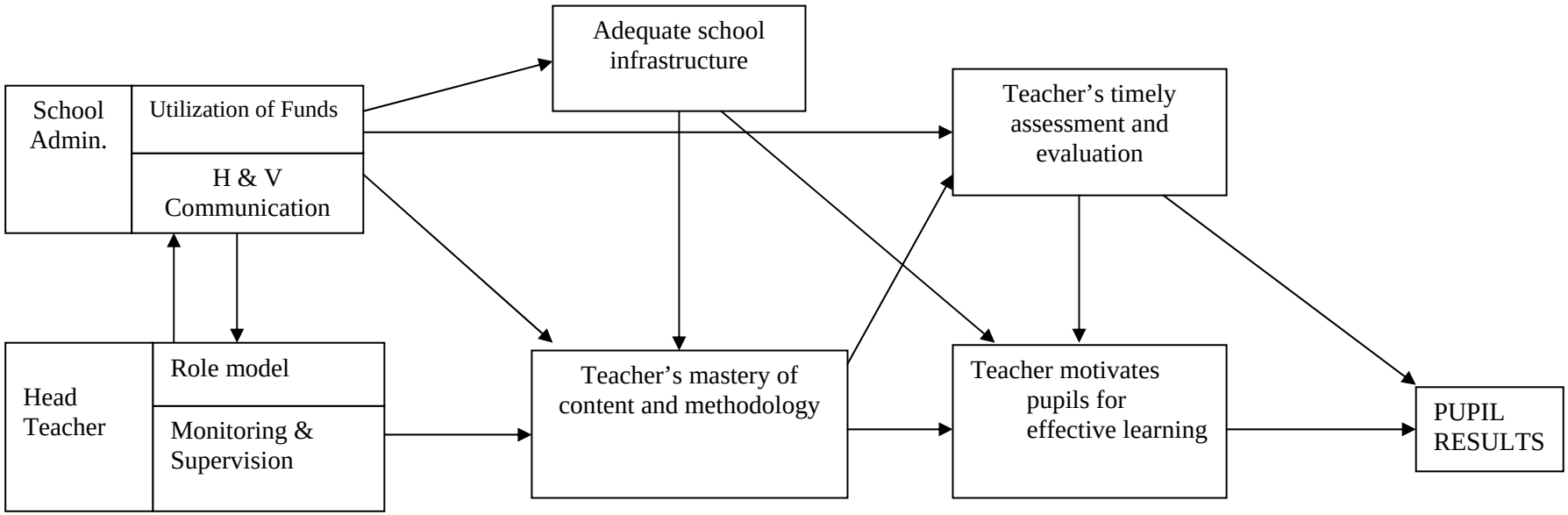
Definition: Community involvement is effective when:

1. The child is provided with basic needs by parents
2. Parents send children to attend school and visit the school regularly
3. Parents and community provide financial and material support

Characteristic	*Indicator*
The child is provided with basic needs by parents	(a) Pupils have full school uniform (b) Clean and well dressed (c) The pupils have scholastic materials (d) Feeding programmes (e) Community initiatives for orphans and the needy
Parents send children to attend school and visit the school regularly	(a) Regular attendance of pupils at school (b) Pupils' punctuality at school (c) Implementation of resolutions by parents to ensure children's regular attendance (d) Parents' visit timetable at school (e) Parents' disciplinary records (f) Parents' meetings resolutions (g) Parents' day and parents' meeting
Parents and community provide financial and material support	(a) Parents financial and material contribution (b) Community financial and material contributions

THE RELATIONSHIP AMONG CHARACTERISTICS THAT INFLUENCE PRIMARY SCHOOL LEAVING EXAMINATION RESULTS

IN THE SINGIDA REGION OF TANZANIA



9. BIBLIOGRAPHY

Association for the Development of Education in Africa (ADEA). 2005. *ADEA Newsletter*, Volume 17, Number 2.

Heneveld, Ward. 1994. "Planning and Monitoring the Quality of Primary Education in Sub-Saharan Africa". AFTHR Technical Note No. 14. Washington, DC: The World Bank.

Heneveld, Ward, and Craig, Helen. 1996. *Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa*. World Bank Technical Paper Number 303. Washington, DC: The World Bank.

Lockheed, Marlaine, Verspoor, Adriaan M., and associates. 1991. Improving Primary Education in Developing Countries. Washington, DC: The World Bank/Oxford University Press.

Orivel, François. 2004. Book review of Postlethwaite, T.N., "Monitoring Educational Attainment" in: *IIEP Newsletter*, vol. XXIII (No. 3) .

Postlethwaite, T.N. 2004. *Monitoring Educational Achievement*. Paris: UNESCO: International Institute for Educational Planning.

Rajonhson, Lina, « Étude local sur les característiques des écoles primaries efficaces dans la province de Toamasina-Madagascar . 2006. Paris : ADEA.

A Research Team of Educators from the 5 Districts. 2004. "Critical Characteristics of Effective Primary Education in the Rwenzori Region of Uganda". Kampala: Development Cooperation Ireland.

Swai, Fulgence, and Ndidde, Alice. 2006. "Local Research on the Characteristics of Effective Primary Schools in Singida, Tanzania". Paris: ADEA

Verspoor, Adriaan. 1989. "Pathways to Change: Improving the Quality of Education in Developing Countries". World Bank Discussion Paper 53. Washington, DC: The World Bank.

Verspoor, Adriaan. 2003. "The Challenge of Learning: Improving the Quality of Basic Education in Sub Saharan Africa. Paris: ADEA.

Schön, Donald A.. 1983. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.