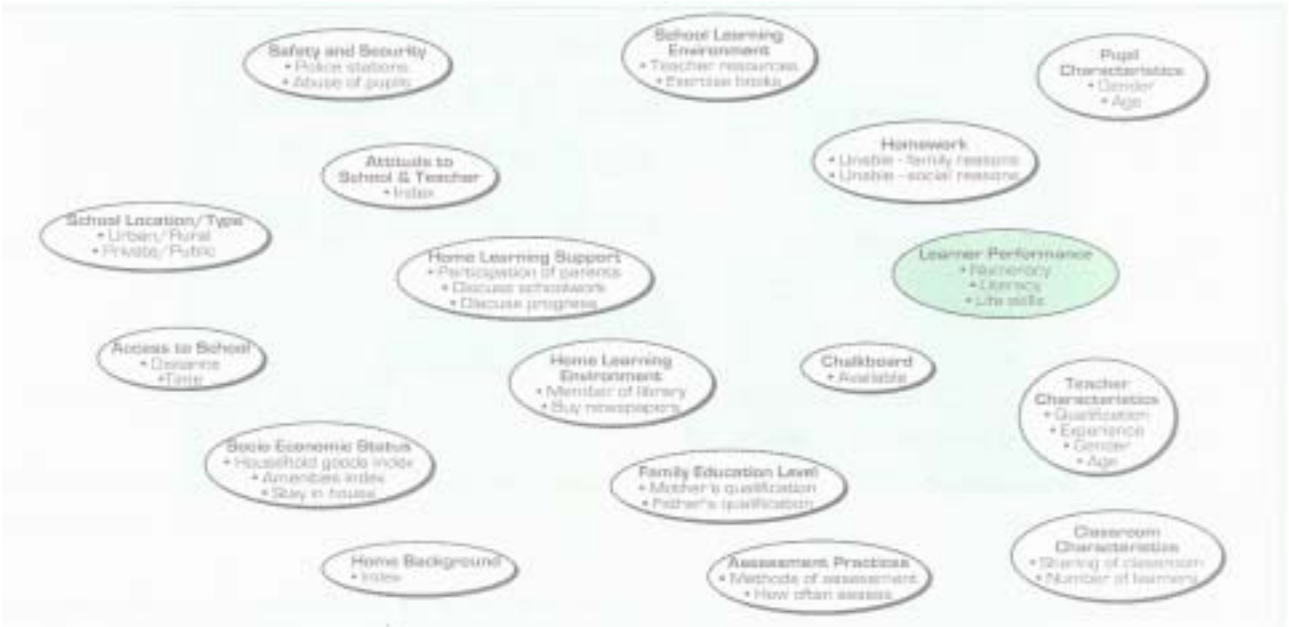
CHAPTER 5

FACTORS INFLUENCING LEARNER PERFORMANCE

Knowing what children learn and under what conditions they are has been the major emphasis of the foregoing chapters. The present chapter provides detailed analyses of the factors that influence learner performance in the 1999 MLA surveys conducted in 11 African countries. Path analysis [LISREL] was used for this purpose as it allows one to optimally understand the interplay [direct, indirect and total causal effects] between the many personal and contextual factors on learner performance. In the first section of this chapter, an overview of these factors and their sources is given. Thus the primary focus is on the specific processes to be employed for identifying those variables that may, or may not, have a significant influence on the teaching and learning processes in general, and on the performance of learners in particular. It must be noted, however, that there are many other approaches that can be used to identify variables that influence learner performance.

A conceptual model capturing the various factors influencing learner performance and the inter-relationships is presented first. This model is built upon the results from the bivariate and multivariate analyses carried out in the 11 African countries of the 1999 MLA surveys. The most important predictors on learning achievement are retained for the path analysis with LISREL. The results from the LISREL path analysis are presented separately for every country with a view to identifying country-specific factors and inter-relationships in influencing learner performance. This is then followed by a cross-examination of the common as well as the country-specific determinants of learner performance in order to relate the findings and implications to the decision-making processes at both national and regional levels.

FIGURE 5.1: GLOBAL CONCEPTUAL MODEL FOR FACTORS INFLUENCING LEARNER PERFORMANCE



GLOBAL MODEL: FACTORS INFLUENCING LEARNER PERFORMANCE

In the MLA project, all questionnaires were designed to elicit information on specific variables that representatives from participating countries regarded as important for an understanding of the contextual background of learners in the school system [see Appendix B for more information]. In order to form a better understanding of the various factors that influence learner performance, different variables were identified based on previous research as well as on the knowledge and experience of the authors. The variables identified for analysis, which are noted below, are presented in terms of the questionnaires from which information was solicited.

Learner questionnaire

- *Learner characteristics [LC] comprise two variables:* age and gender.
- *Home background [HBG]* was calculated from the following questions: Do you have a meal before coming to school? Do you have a meal after leaving school? Did you attend any pre-school classes? Do your parents buy newspapers/magazines? Do you have a radio, telephone TV, video and/or computer at the place where you live?
- *Access to school [AS]* comprises questions regarding how far away the school is and how long it takes to get there.
- *Homework [HW]* has two variables. The first is whether the learner is sometimes unable to do homework because he/she has to assist the family, and the second is whether he/she is unable to do homework because of social/leisure reasons.
- *Attitude to school and teacher [ATT*] included questions that focussed on whether the learner likes school, likes the teacher, learns a lot at school and enjoys learning.

Parent Questionnaire

- *Family education level [FEL]* comprises questions regarding the highest qualification level attained by both the mother and father.
- *Home learning environment* [HLE] focuses on whether there are books or magazines in the home and whether parents are members of a library.
- The *Home learning support [HLS] construct* focuses on whether parents participate in school activities relating to their grade 4 child, discuss school work or progress with the child or the teacher.
- *Socio economic status [SES]* has three variables: [a] Does the family live in their own home? [b] An index that counts the number of amenities [running water, electricity, etc.] and [c] a household goods index [i.e. do they own a radio, TV, etc.].

Teacher Questionnaire

- *Teacher characteristics [TC] include* background information such as age, gender, years in the teaching profession and teacher qualifications.
- *Classroom characteristics [CC]* comprise those classroom variables that have an influence on the teaching and learning process, i.e. whether the classroom was shared with learners of another grade and the number of learners in the class.
- The *Assessment practices [AP]* construct looked at the range of assessment methods employed

by the teacher as well as the frequency at which the learners were assessed.

- *Availability of chalkboard [CHB]* focussed on whether chalkboards were available for use by teachers.
- *School learning environment [SLE]* included the various facilities and resources available for use in the teaching and learning process, e.g. wall-charts, etc. and whether all the learners have exercise books to write in.

School Questionnaire

- *School location and type* [SLT] refers to: [a] whether the school was located in an urban or rural area and whether it was a private or public school.
- For the *Safety and security [SS] construct,* questions were posed to determine the difficulty of access to a police station as well as the status of abuse of learners by teachers.

Tests

- *Learner performance [LP] comprises* the total mean scores for each of the three tests: [1] Life Skills, [2] Literacy and [3] Numeracy in the 1999 MLA surveys in Africa.

DETERMINANTS OF LEARNING PERFORMANCE AND THEIR INTER-RELATIONSHIPS

The global conceptual model [Figure 5.1] provides an understanding of the factors that have been retained for further analyses of determinants of learning achievements and their inter-relationships from the 1999 MLA surveys in Africa. To ascertain the relationships between the selected variables and learner performance, the Pearson, tetra-choric, biserial and polychoric correlation coefficients were calculated [depending on the type of variable, i.e. interval, ordinal or dichotomous] and examined for each country. This process entailed merging the data from the different questionnaires for each country and disaggregating variables at the school level to the learner level [on which the analyses were done]. Only those constructs and their respective variables that had significant correlation coefficients with the test scores are retained for the LISREL path analysis. In total, 17 constructs were identified for the path analysis.

Two problems were encountered while preparing the data for the path analyses in the different countries. The first was that there were many missing data for some of the questions [in some cases more than 30%]. Such questions were excluded from the path analysis. The second problem was that there was very little variation in some questions, i.e. most of the responses [90% or more in some cases] fell in one response category. Such questions [variables] were also excluded from that path analysis since these often are the cause of artificially high correlations, which would distort the true situation.

The foregoing serves as an explanation why the models for the different countries are not the same: They differ in terms of the number of constructs in the model and in the variables used to measure the constructs.

Path analysis is a statistical technique that allows one to compare the direct, indirect and total causal effects of variables in a complex system of relationships. This type of analysis can be conducted using

a number of different statistical software packages and methodologies. The LISREL model consists of two parts: [a] the measurement model used to specify the relationships between latent variables and their indicators [observed variables], and [b] the structural model in which the relationships between the latent variables are specified. For each of the 11 MLA participating countries, the model that was used was subjected to a measure of fit. Table 5.1 gives the number of observations [N] in each country that could be used for the path analysis, as well as the RMSEA [root mean square error of approximation] which is an indication of how well the LISREL model fits the data. The well known Chi-squared statistic for model fit was not used as it is based on the assumption that the model holds exactly in the population. This assumption may be unreasonable in empirical research since models which will hold approximately in the population will be rejected in large samples.

TABLE 5-1: GOODNESS OF FIT OF COUNTRY MODELS

COUNTRY	N	RMSEA	P-value [close fit]
Botswana	3087	0.082	0.9961
Madagascar	2097	0.057	0.0599
Malawi	781	0.099	0.0001
Mali	648	0.094	0.0001
Mauritius	1429	0.078	0.0001
Morocco *	3087	-	-
Niger	588	0.152	0.0001
Senegal	742	0.001	0.9980
Tunisia	1214	0.001	0.9983
Uganda	3028	0.073	0.0001
Zambia	710	0.089	0.0001

* No degrees of freedom for testing fit of model

The RMSEA gives an idea of the fit of the model to the population correlation matrix [adjusted for the degrees of freedom]. It is suggested that a value of 0.05 indicates a close fit, and that values up to 0.08 represent reasonable fits [Browne & Cudeck, 1993]. The p-value in the table is a formal test that the model represents a close fit to the population.

Country-Specific LISREL Analysis

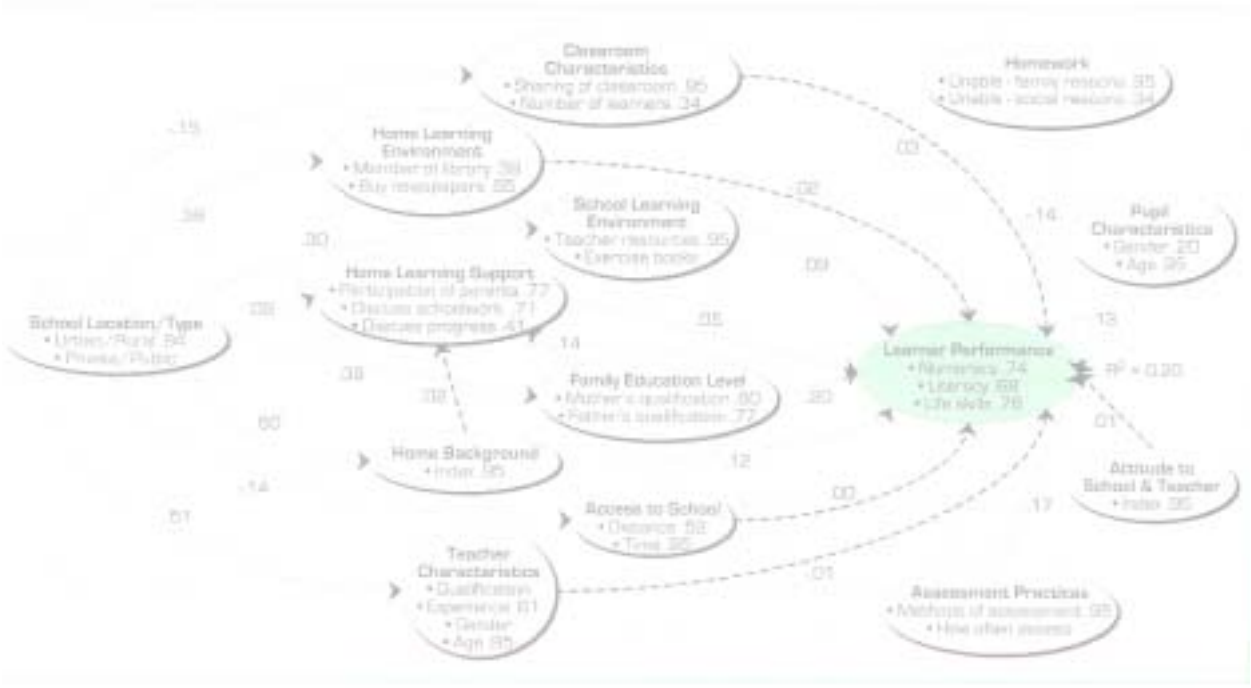
This section examines the correspondence of the global model with the country-specific model of determinants on learner performance in the 11 African countries that participated in the 1999 MLA surveys. For each country, the results are presented individually using the respective path diagrams to illustrate the significant and non-significant causal relationships. In these diagrams, solid lines represent statistically significant paths while broken lines represent paths that are not statistically significant. In Appendix E, the direct, indirect and total path coefficients are given for each country as well as the matrix of correlations between all the constructs used in the model. Some details on the measurement model and the structural equation model of the LISREL analysis for each country are also reported in Appendix E. Finally, some global as well as some country-specific trends from the results of these LISREL path analyses are reported.

BOTSWANA

The LISREL results from Botswana indicate that the predictors used in the model are capable of explaining some 20 percent of the variance in learner performance. It also shows the indirect and total effects of some key predictors of learning achievement, namely the family education level and the type

and location of schools. The results from the path diagram in Figure 5:2 may be summarised as follows. The strong impact of the home environment on learner performance in Botswana is manifested through the influence [direct, indirect and total] of learner's family education level and home background characteristics. These findings support the fact that quality education for all cannot be optimally achieved without improvement in the home environmental conditions of learning. A similar trend is observed on the influence of school conditions of teaching and learning. In this model, the type and location of school, as well as the school-learning environment, are important determinants of learning achievement. The assessment practices of teachers as well as learner opportunities to do their homework are significantly associated with learner performance. Last, it is important to note that the age and gender of the learners affect their performance in that girls and younger children in the population tested performed better than their counterparts, boys and older learners. The following diagram [Figure 5:2] shows the model and the path coefficients for Botswana.

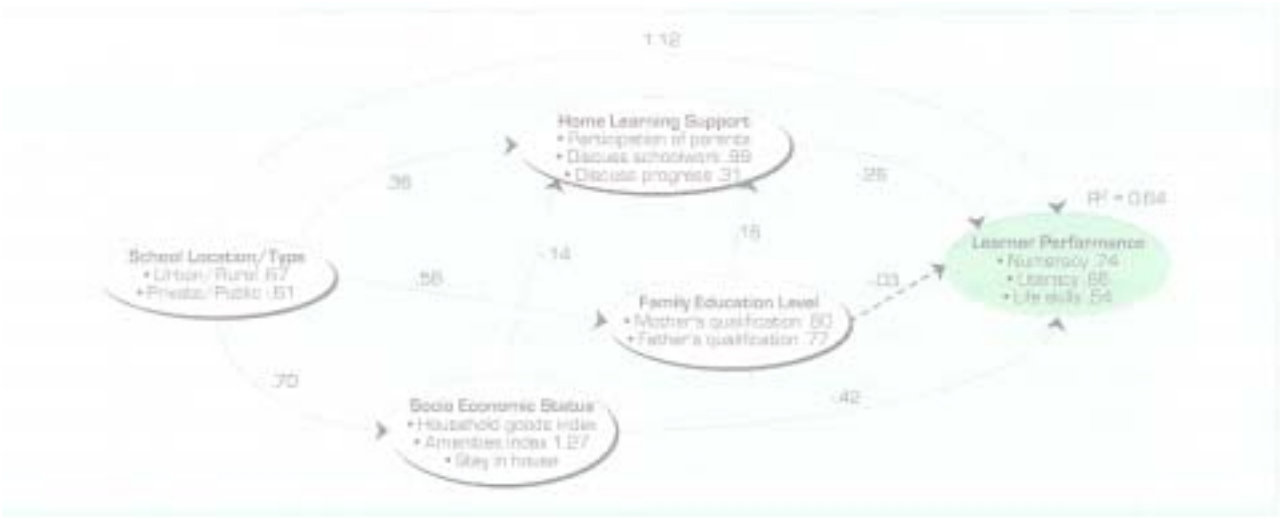
FIGURE 5-2: BOTSWANA - LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE



MADAGASCAR

The LISREL path analysis on the Madagascar data is revealing in many ways. Only five constructs [latent variables] from the global model are retained for this analysis. Besides learner performance scores, the four predictors are: location and type of school; the learners' socio-economic status; home learning support and family education level [Figure 5:3]. These four predictors explain as much as 64 percent of the variation in learner performance. As shown in the Appendix E there is a problem of multicolinearity, namely high correlation between some of the predictor constructs, specifically between school location and type and socio-economic status. Since this may affect the whole analysis, the results from Madagascar must be treated with some caution. Much of the variation in learner performance emanates from the school environment and mediates through other predictors [direct, indirect and total causal effects] which are all captured by the differences that are due to school location and type. It is equally important to note the negative influence of socio-economic status, home learning support and family education level on learner performance, which is caused by the problem of multicolinearity.

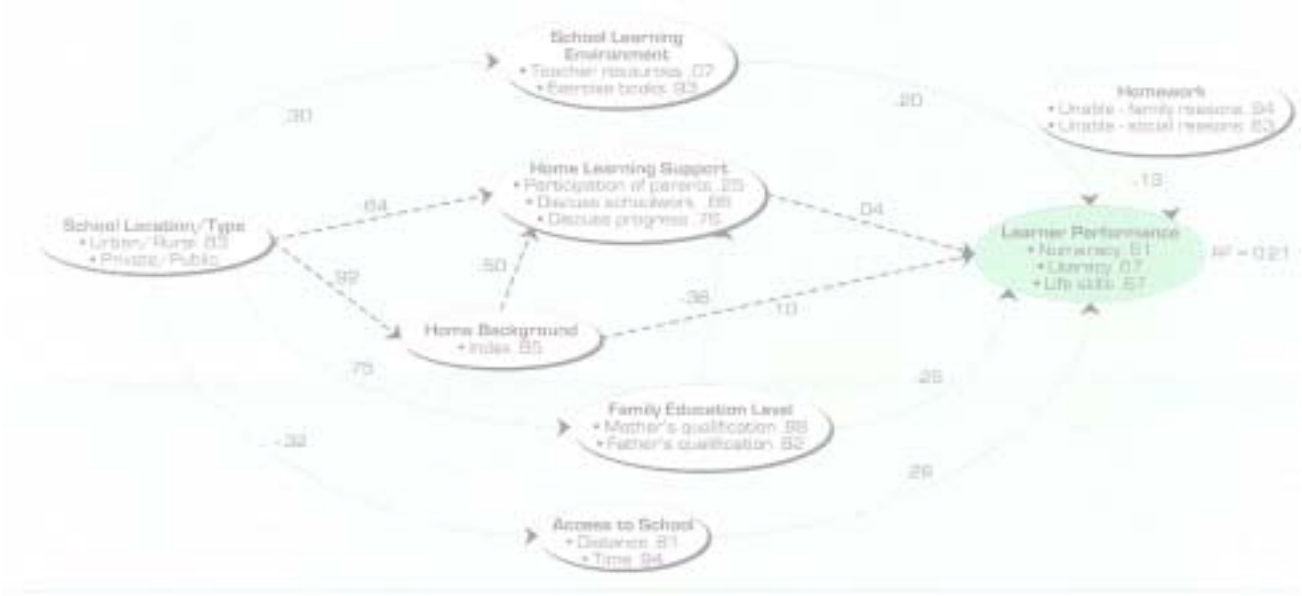
FIGURE 5-3: MADAGASCAR - LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE



MALAWI

The Malawi LISREL model explains 21 percent of the variance in learner performance [Figure 5:4]. Several constructs [latent variables] from the global model could not be retained in the Malawi model, namely socio-economic status, safety and security at school; attitude to school and teacher; assessment practices; home learning environment, and the characteristics of learners, their teachers and classroom. However, the determinants of learner performance in Malawi re-emphasise the importance of the home environment of learning through the very strong impact of family education level and home background characteristics. The school characteristics occupy an equally important place in determining learning achievement, namely through school location and type; the distance and time to

FIGURE 5-4: MALAWI - LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE

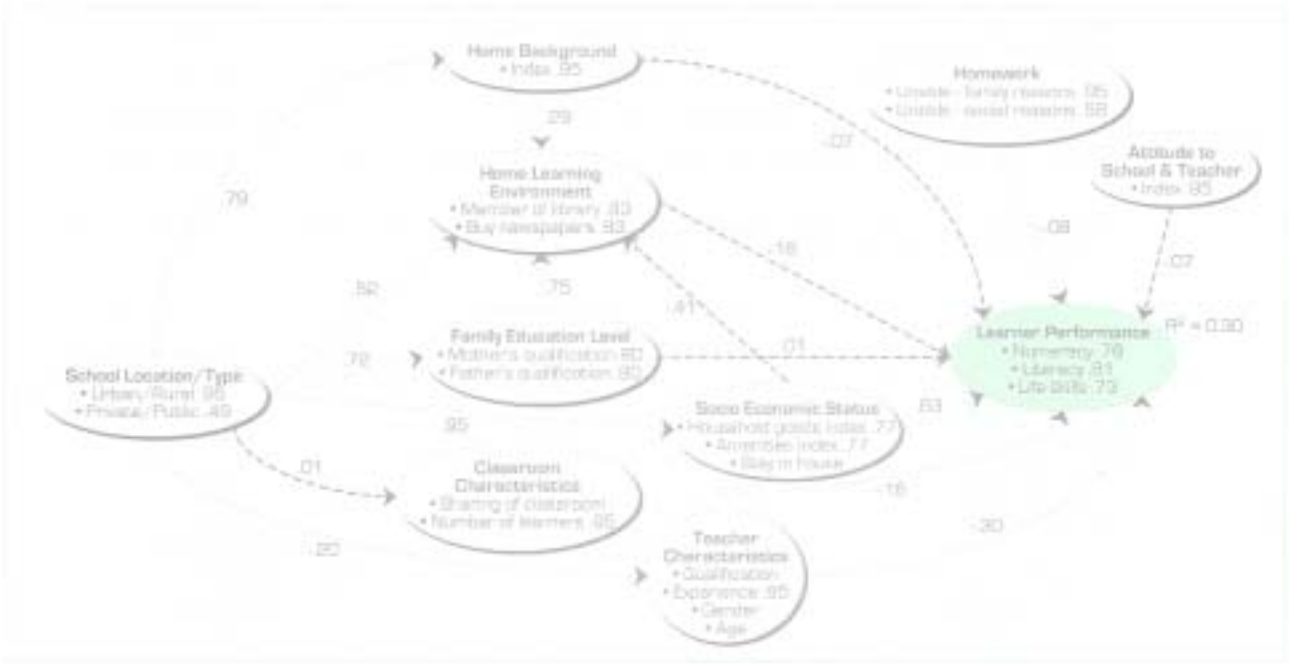


get to school; and the school-learning environment. The latter is measured by teachers' access to instructional learning materials and infrastructures [chalk, wall-charts, exercise books and other learning aids]. It is also important to note the causal influence of possibilities to do homework on the learner performance in Malawi. Again and again, the inter-relationships between the school and the home characteristics, contexts and processes are found to jointly predict differences in the learning achievement and quality of education as a whole.

MALI

The results from the LISREL path analysis in Mali are presented in Figure 5:5. The variables selected for the LISREL model explain 30 percent of the variation in learning achievement of the Malian learners. The Mali model consists of more than half of the predictors of learning achievement selected from the global analysis. It is important to note that the predictors are from all four sources of information, i.e. questionnaires of the learners and their parents, teachers and school head teachers. The most striking findings from the analysis in Mali are the very strong influences of socio-economic status, school location and type and teacher characteristics on learner performance. Although not the result of direct causal effects, the level of education of the family and the home background characteristics have some indirect and total causal effects on learner performance. A similar feature can be associated with the strong indirect and total causal effects of school location and school type on learner performance as mediated through the other predictors of the LISREL model in Mali. Having more opportunities for doing homework also influence learner performance. Finally, the importance of favorable classroom conditions and characteristics of the teaching-body on learner performance in Mali must also be considered.

FIGURE 5-5: MALI- LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE

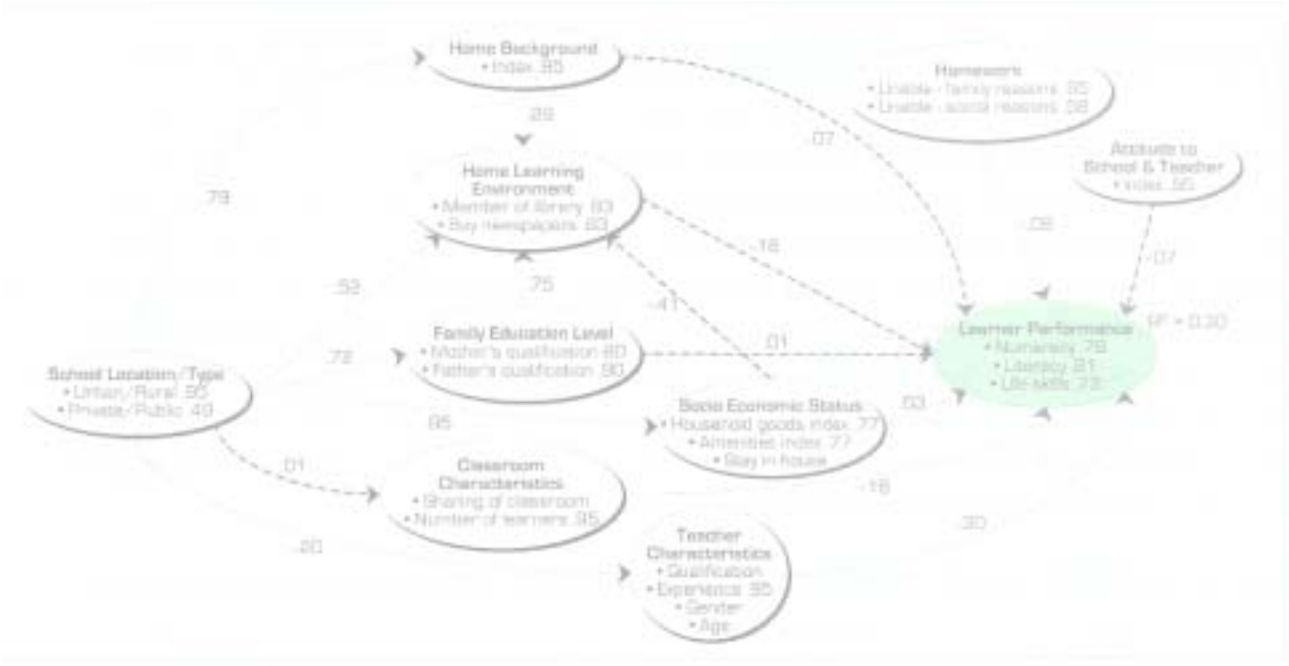


MAURITIUS

The results from the LISREL path analysis together with the path coefficients are given in Figure 5:6. The Mauritius model is more or less a full model as only five of the constructs from the global model, namely attitude to school and teacher; learner characteristics; socio economic status; chalkboard and

school learning achievement could not be retained for the LISREL analysis. The Mauritius model explains 44 percent of the variation in learner performance. The following trends are being observed. First, the three most powerful predictors of learning achievement based on the 1999 MLA survey in Mauritius are the education levels of the family, the location and type of school and the opportunities for doing homework. Second, unsafe circumstances for teaching and learning as measured by the construct school safety and security seem to have a significant influence on learning achievement and quality of education as a whole. Third, the importance of reading resources on learning achievement as measured through the home learning environment construct deserves special attention. Lastly, several other predictors, namely the characteristics of teachers, classroom and homes, the assessment practices, home learning support and access to school show themselves as weak predictors of learning achievement in Mauritius.

FIGURE 5-6: MAURITIUS- LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE



MOROCCO

As shown in Figure 5:7, the LISREL model in Morocco consists of only a few predictors of learner performance. There are only five of them: [1] the location and type of school: [2] home background of learners; [3] school safety and security: [4] learner's attitude to school and teacher: and [5] homework. These five predictors explain 23 percent of the variation in learner performance in the 1999 MLA survey in Morocco. It is important to note the following trends from the Moroccan path analysis. First, the variation in learner performance is very strongly determined by the nature of the safety and security in Moroccan schools. Second, much of variation in learner performance that is due to other predictors is mediated strongly through the location and type of schools attended by the learners in Morocco. Third, the home background characteristics of the learner play an important role in her/his learning achievement. Finally, weak but equally significant are opportunities for doing homework and learner's attitude to school and teacher.

FIGURE 5-7: MOROCCO- LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE

NIGER

The determinants of performance in Niger emanate mostly from the home and school environments of learning. Unfortunately, predictors such as the characteristics of learners, teachers, classroom as well as the process variables, namely assessment practices, access to school and learner's attitudes to school and teacher could not be used in the Niger model. The six predictors in the Niger LISREL model explain as much as 62 percent of the variation in learner performance. It is striking to observe such high causal effects, namely the very strong influence of socio-economic status variables and the availability of chalkboard on learning achievement. Likewise, the availability of learning and teaching resources [exercise books, chalk, wall charts and other learning aids], the opportunities to do homework, the home background characteristics of the learner and the location and type of school attended are important determinants of learning achievement in Niger.

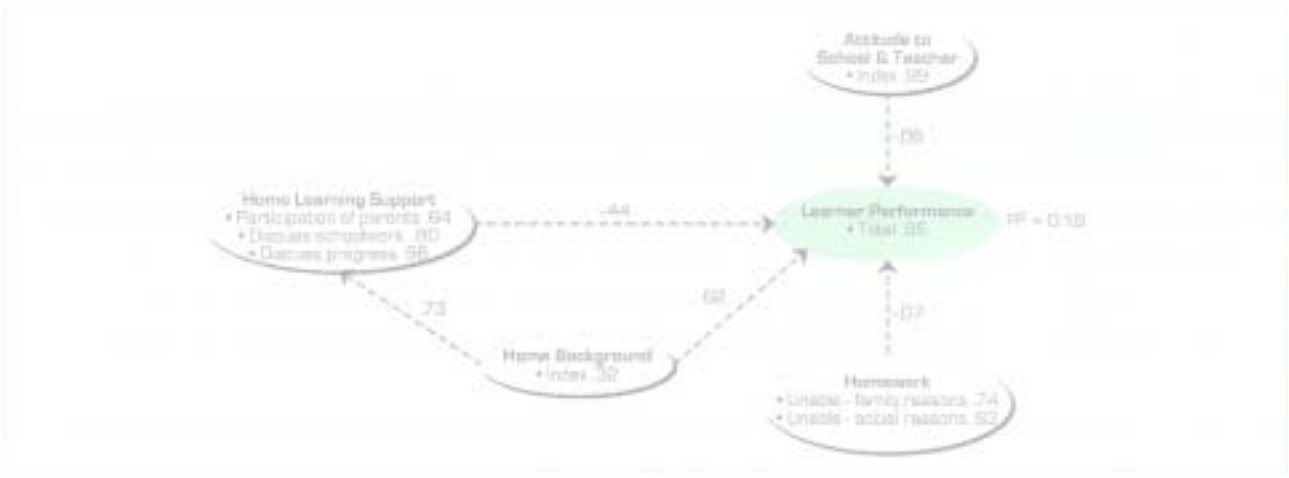
FIGURE 5:8: NIGER - LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE

SENEGAL

The global model for the analysis on the determinants of learner performance has been less successful in the *1999* MLA data from Senegal. Only five constructs could be retained for the LISREL analysis.

They are learner performance and the four predictors namely, home learning support, home background characteristics, attitude to school and teacher and the opportunity to do homework. The results are shown in Figure 5:9. Altogether 19 percent of the variation in learning is accounted for by these four predictors. None of the paths in this model are statistically significant and the interpretation should therefore be read with some caution. The rather strong influence of home learning support on learner performance measured by how often parents participate in school activities; how often they discuss the child's progress with the teacher; and how often they discuss schoolwork with their children deserve some special consideration. These can boost the parent-child relationship in teaching and learning at home in view of the goal of quality education for all. Equally decisive are the opportunities made available to the Senegalese children for doing their homework. These in turn, may affect their attitudes to school and to their respective teachers which may also be determined by a number of socio-economic, educational and cultural factors. Finally, the results from the Senegalese LISREL analysis show the importance of learner home background characteristics on learner performance on the one hand, and as mediators of other predictors [indirect and total causal effects] on other hand. The home background characteristics of the Senegalese children remain therefore the most powerful determinants of learner performance.

FIGURE 5:9 SENEGAL - LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE

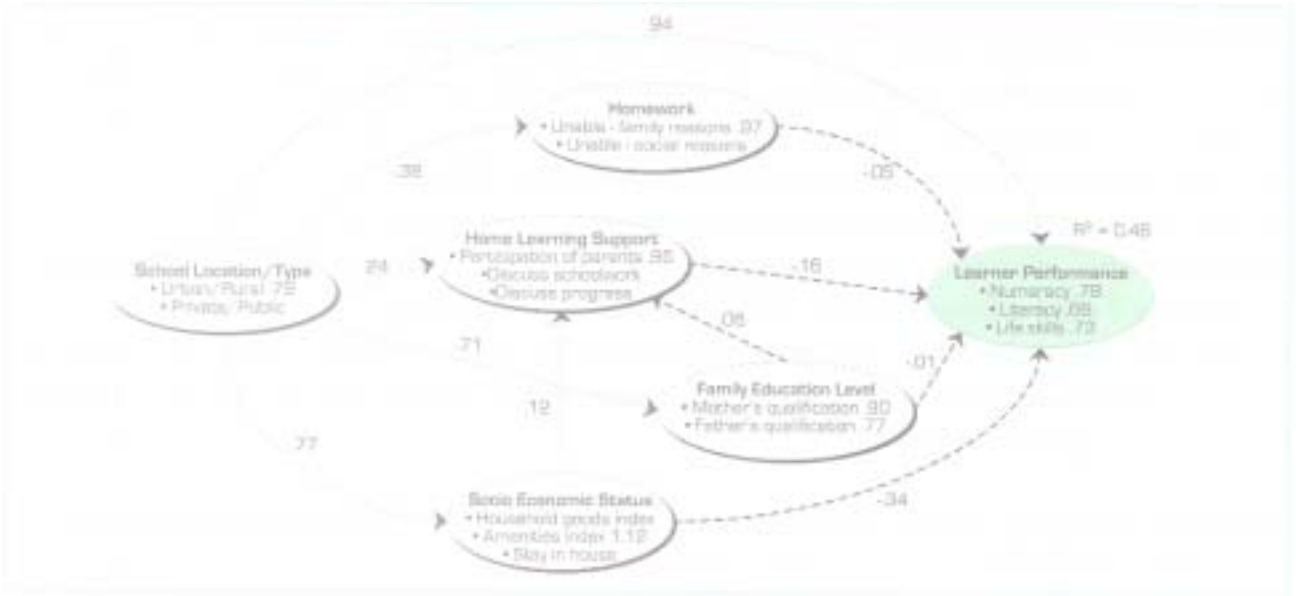


TUNISIA

It can be observed from Figure 5:10 that only six constructs from the global model were retained for the LISREL analysis for the 1999 MLA survey data in Tunisia. However, the five predictors, namely school location and type; socio-economic status; home learning support; homework and family education level explain as much as 46 percent of the variation in learner performance of the Tunisian learners. The strongest predictor of learner performance in the Tunisian model [direct, indirect and total causal effects] is the location and type of school. The rather high causal effects of this predictor on learner performance in Tunisia demonstrate the fact that attending or not attending the right school is the principal source of success and henceforth impacts on the quality of education offered. The socioeconomic status of learners has a non-significant and negative effect [unexpected] on learner performance, but this is possibly due to its high correlation with the location and type of school [some degree of multi-co linearity]. The same can be said for the influence of the family education level. Taken together with the influence of the home learning support, the possibilities offered for homework at home and the educational level of the family, it is possible to argue

that the home learning environment play an equally important role as the location and type of school attended for learning achievement and quality of education, in general.

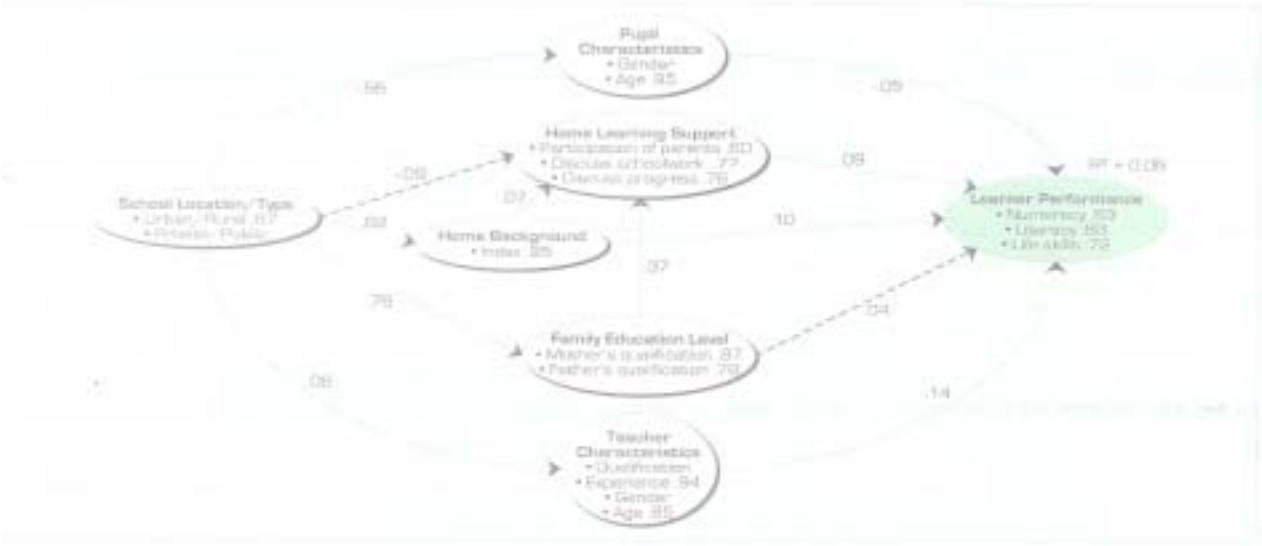
FIGURE 5:10 TUNISIA - LISREL ANALYSIS ON DETERMINANTS OF LEARN RE PERFORMANCE



UGANDA

The results from the LISREL analysis of the 1999 MLA survey in Uganda are presented in Figure 5:11. The striking feature of these results is that only 6 percent of the variation in learner performance is explained by these 6 predictors, namely the location and type of school, the home background characteristics, the home learning support, the family education level, the characteristics of learners and the characteristics of their teachers. However, several important trends can be seen from these results.

FIGURE 5:11 UGANDA - LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE



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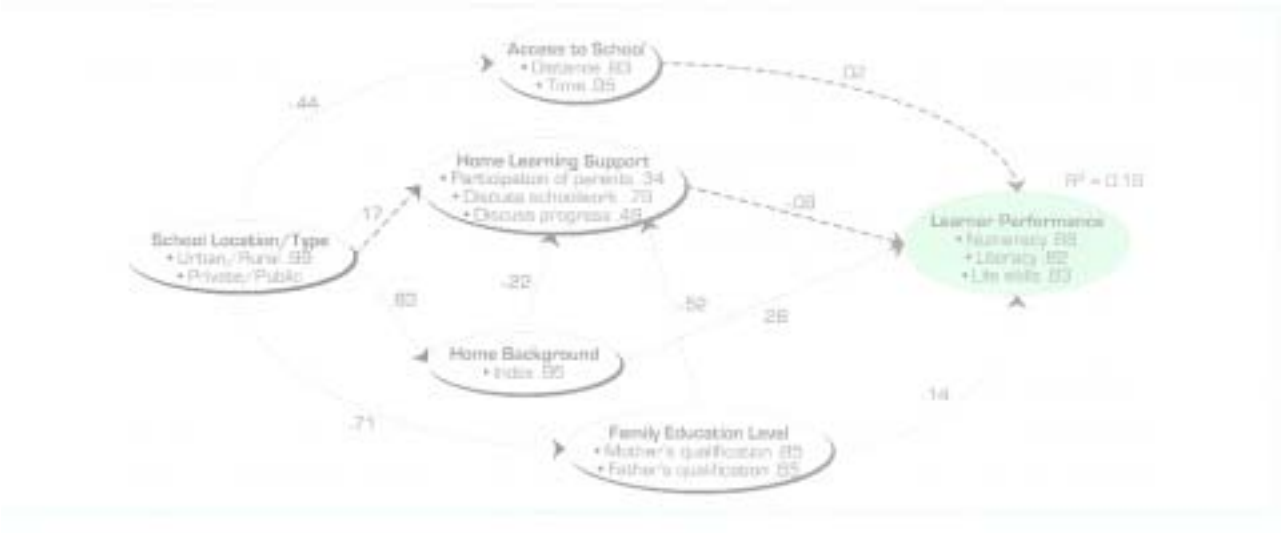
First, attending a given type of school in a certain locality contributes significantly to learner performance. Although this predictor does not display a statistically significant direct effect, it plays an important mediating role [indirect and total] through the other predictors of learner performance. Second, without the path analysis, the importance of the location and type of school on learner performance in Uganda could have been easily overlooked. Third, some of the variation in learner performance is due to the characteristics of the learner, her/his teacher and her/his home background. Having a conducive environment at home; having higher qualified and more experienced teachers, and being specifically young, characterise the higher achievers in the 1999 MLA survey in Uganda. Finally, both the education level of the family and the positive support for learning at home contribute in boosting learner performance in Uganda.

ZAMBIA

The 1999 MLA survey data from Zambia clearly demonstrates that learner performance is determined by just few of the predictors identified in the global model [Figure 5:12]. However, the five predictors, namely the location and type of school; access to school; home background characteristics; home learning support and the educational level of the family account for 18 percent of the variation in learning achievement of the Zambian learners. The strongest determinant of learner performance in the LISREL analysis in Zambia is the location and type of school, which in fact has strong indirect and total causal effects. These effects are henceforth mediated via the other predictors in the Zambian LISREL model, namely access to school. Equally important are the home background characteristics of learners that have the strongest direct effects on their learner performance. This evidence is also supported by the significant influence of the education of the family and the support to learning at home on learner performance. Lastly, the results from the Zambia LISREL analysis clearly indicates the importance of home learning on learner performance.

FIGURE 5:12 ZAMBIA - LISREL ANALYSIS ON DETERMINANTS OF LEARNER PERFORMANCE



THE REGIONAL ANALYSIS: SIMILARITIES AND UNIQUENESS

In this section, an attempt is made to examine the causal effects from the predictors of learner performance across all the 1999 MLA survey countries in Africa with a view to identifying common and

specific areas of interventions. This analysis could contribute to informed decision-making at different levels and among different partners of Education For All and should lead to improvement in learner performance and in the long run, to the achievement of quality of education for all in Africa.

The results for the regional analysis are presented in Table 5:2. All the determinants of learner performance are presented in relation to their respective total causal effects [direct + indirect] on learner performance in the separate LISREL model for every country. This summary table serves the main purpose of understanding the educational realities in the 11 African countries surveyed in 1999, and the lessons to be learnt when using such a broader perspective [LISREL path analysis] to uncover the complexities of the conditions for teaching and learning and their impact on the African learners opportunities and performance. This section will directly contribute to the between- and within- countries' analyses performed in the earlier chapters of this book. Knowing the root-causes of between-and within- disparities in the quality of education offered in Africa and elsewhere hardly pre-occupy those who do not convincingly argue for learner-centred education, the reason why so little is known or made known in this field.

TABLE 5:2 DETERMINANTS OF LEARNING ACHIEVEMENT - COMMON AND UNIQUE FEATURES IN 11 AFRICAN COUNTRIES

	Botswana	Madagascar	Malawi	Mali	Mauritius	Morocco	Niger	Senegal	Tunisia	Uganda	Zambia
SLT	0.16	0.71	0.23	0.39	0.43	0.39	0.11	-	0.63	0.15	0.35
AS	0.00	-	0.28	-	0.03	-		-	-		0.02
HBG	0.13	-	0.12	-0.11	0.09	-0.38	0.05	0.30	-	0.11	0.30
AP	0.17	-	-	-	0.03	-	-	-	-	-	
FEL	0.21	-0.08	0.23	-0.11	0.49	-		-	-0.02	0.07	0.19
HLE	-0.02	-	-	-0.16	-0.17	-	-	-	-	-	
HLS	0.05	-0.26	0.04	-	0.03	-	-	-0.44	-0.16	0.09	-0.08
ATT	0.01	-	-	-0.07	-	-0.04	-	-0.06	-	-	-
SLE	0.09	-	0.20	-	-	-	0.30	-	-	-	-
LC	-0.13	-	-	-			-	-	-	-0.05	-
CHB	-	-	-	-	-	-	0.53	-	-	-	-
HW	-0.14	-	-0.13	-0.08	-0.22	-0.02	0.19	-0.07	-0.05	-	-
TC	-0.01	-	-	-0.30	-0.01	-	-	-	-	0.14	-
CC	0.03	-	-	-0.16	0.04	-	-	-	-	-	-
SS	-	- -	-	-	-0.19	0.80	-	-	-	-	-
SES	-	-0.38	-	0.56	-	-	0.51	-	-0.35	-	-

School Differences

The main lesson that can be drawn from Table 5:2 is that the determinants of learner performance behave differently [in strength and in commonality] across the 11 MLA countries surveyed in 1999. This finding enriched the earlier ones in that it points out the importance of country-specific policies for Africa when dealing with quality of education for all. The second most striking finding from this analysis is the consistent results [10 out of 11 countries] concerning the strong impact of school location and type [SLT] on learner performance and the important role this predictor plays as a mediator for other predictors in the model. This finding reinforces the earlier findings from the within-country analyses, namely that quality education for all can only be guaranteed when such structural disparities [urban versus rural; and private versus public] are seriously addressed and eliminated over time.

Importance of the Family

Likewise, the results from the regional analysis clearly indicate that the home environments of learning represented in terms of the education level of the family [FEL], the home learning support [HLE] and the home background characteristics of learners [HBG] have powerful influences on learner performance across the majority of 11 African countries surveyed. This finding is consistent with most school surveys carried out in developed and in developing countries over the past 40 years. Improving the level of education of the

family in Africa through adult literacy programmes and other forms of life-long learning could improve the quality of education in general and learner performance in particular. Further, this investment may also help improving the home learning conditions, processes and characteristics for the African child, factors which strongly influence learner performance in most of the countries surveyed.

Homework Opportunities

An important factor which consistently influences learner performance in 8 out of the 11 countries surveyed is the opportunities available at home for the child to do her/his homework [HW]. This finding reveals that the family and the educational stakeholders need to facilitate learners in doing their homework while reducing the time spent in helping the family with other home duties and responsibilities. It was also found that the opportunities to do one's homework are conditioned by the educational, social, economic and cultural environments of the learner and family environment, which altogether have important direct, indirect and total causal effects on learner performance.

Unique and Differing Impacts

As mentioned earlier, the purpose in this section was also to indicate some uniqueness in the regional analysis of determinants of learner performance. From Table 5:2, it is possible to observe that several determinants appear only in few countries but also indicate their uniqueness in the global model. The following B predictors from the global model have significant effects on learner performance in 4 or less countries out of the 11 ones surveyed. These results can be used also to account for the degree of importance of the different predictors in the global model. The predictors are presented here in order of their relative importance, i.e. the strength of the total path coefficient and its frequency across the 11 countries surveyed: [1] socio-economic status [SES]; [2] access to school [AS]; [3] attitude to school and to the teacher [ATT]; [4] teacher characteristics [TC]: [5] home learning environment [HLE]; [6] school learning environment [SLE]; [7] classroom characteristics [CC]; [8] school safety and security [SS]; [9] assessment practices [AP]; [10] learner characteristics [LC]; and [11] availability of chalkboard [CHB].

CONCLUSION

The striking feature of these unique and different impacts is that it also indicates the extent to which the predictors behave differently among 11 countries and how they deviate from the global model of determinants of learner performance. Two important patterns must be mentioned, the first related to the amount of variance explained by each country model, and second, the number of significant predictors in each country model. In 4 out of the 11 countries, more than 40 percent of the variation in learner performance is explained. They are Madagascar, Niger, Tunisia and Mauritius. The 3 countries for which less than 20 percent of the variation in learner performance is explained are Uganda,

Zambia and Senegal while for the remaining 4, between 20 and 40 percent of the variation is explained. The second pattern, namely the frequency of the 16 predictors, also show three major trends. The first trend shows countries with 5 and less predictors of learner performance [Senegal, Madagascar, Morocco, Tunisia, and Zambia]; the second one with more than 5 but less than 10 predictors [Niger, Uganda, Malawi, and Mali] and the third pattern with the remaining 2 countries [Mauritius and Botswana] with 11 and 13 predictors respectively. It should be noted that these patterns also indicate that too many predictors may not mean much more variation in learner performance, as is the case of Botswana and Niger.

The analysis in this chapter provides further detail information on various aspects in the different countries that impact on learner performance in schools. This information is a rich source of ideas and suggestions for the development and implementation of relevant guideline and policies towards the provision of Quality Education for All. Further analysis of the data will be presented in the forthcoming national, sub-regional and international reports devoted to the MLA project and to the MLA movement as a whole.