Educational Inputs in Cambodian Primary Schools: An Analysis of Factors Influencing Sixth-Grade Student Achievement

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（Received. October 2, 2012）

Abstract: Student achievement can be influenced by different types of educational inputs with results varying across time and context. Studies of educational inputs and student achievement in a variety of contexts can provide valuable insights into how the relationships between educational inputs and student achievement depend upon local context and specific circumstance of education. Cambodian education is distinctive with its high prevalence of community financing of education which results not by the government's deliberate policy but rather by the government's inability to meet the needs of all school-aged children. Cambodian households find that if they want schooling of a reasonable quality especially in primary school level, then they must provide much of the necessary resource. This study attempts to identify the educational inputs which make the greatest impact on student achievement using survey data from school principals, teachers, students and their parents. The study employs multiple regression analysis to build a model for the relationship between educational inputs and student achievement. The result of the analysis shows that the availability of instruction materials has a relatively large impact on student achievement.

Key words: Cambodia, primary school education, educational inputs, student achievement

1. Introduction

Schooling in Cambodia takes place under relatively poor conditions in comparison to regional and international standards. Primary school students in more developed countries are likely to attend classes in modernly equipped building and to receive an annual average of about $52 of non-capital material inputs per student (Lockheed and Verspoor, 1991). They are more likely to be taught by a teacher with an average of sixteen years of formal schooling. Moreover, they attend classes with less than forty other children. In Cambodia, by comparison, primary students are likely to attend a school in almost barren conditions or one which is poorly equipped. On average, they receive only $1.67 of non-capital material inputs per year (MoEYS, 2008). They are likely to be taught by a teacher with only nine years of formal schooling, and they have to attend a large class not less than forty children.

Previous studies on factors influencing students' academic achievement in other developing countries found that the most important factors relating to learning outcomes are per-pupil funding and availability of learning materials including textbooks (Boissiere, 2004; Fuller & Clarke, 1994; Hanushek, 1995; Kremer, 1995; Lockheed & Verspoor, 1991; White, 2004; Willms & Somers, 2001). This finding may reflect the fact that schools in developing countries have been underfunded leading to their relative scarcity of basic necessary educational resources. Cambodia is in this category. The present study examines the relative influence of individual- and

school-related factors in accounting for academic achievement of primary school students in Cambodian rural school context.

Although the government of Cambodia wants to meet all the needs of school-aged children, for the time being, the government still finds itself incapable of meeting all the needs of students they would like to meet. Throughout the 1990s, government spending on education remained at below 10% of the national budget and 90% of the expenditures are largely for teachers' and administrators' salaries (Ray et al., 2010). Increasing government spending on education is a challenging task, which requires improved administrative capacity and greater income taxation or other sources (Bray and Bunly, 2005). Until very recently, school construction and maintenance have been undertaken through community donations, loans from development banks as well as support from national and international NGOs. What is worse is that schools in rural and remote areas have been very poorly funded by the government (MoEYS, 2005; Ray et al., 2010).

Teaching and learning materials are critical ingredients in student's learning. In general, the availability of basic teaching and learning materials has increased considerably in rural primary schools in Cambodia. For instance, most classrooms have a blackboard and most children from poor families are provided with very basic learning materials such as chalk, notebooks, pencils, paper and erasers. Other supplementary instructional materials including globes, maps, and posters are frequently present in primary classrooms. The availability of these teaching and learning materials has often improved as a result of community and donor-funded activities. Further, a student's ability to learn is heavily influenced by school learning environment. Students' learning can be increased if students and teachers attend classes regularly and according to an established timetable, if school facilities are in good repair, if school ground is kept clean, and if classrooms are well organized.

The present study examines how educational inputs affect student achievement in Cambodian primary schools using survey data from school principals, teachers, students, and parents. Educational inputs used in this study include per-pupil funding, teaching and learning materials, and school learning environment. Other school-related variables considered in this study include school SES, class size, and teacher characteristics (i.e. teacher's age, teacher's educational attainment, and teacher's years of teaching experience). The study employs multiple regression analysis to build a model for the relationship between educational inputs and student achievement.

2. Sources of Educational Inputs in Cambodian Primary Education

There are several sources of educational inputs devoted to primary education in Cambodia. The main categories include government funds, community donations, and donor-funding. This study looks at only the two sources of funding: from the government and from the community. Although donor-funding has provided a large volume of support for education for many years, the funding is difficult to quantify partly because of poor school records and partly because most support from NGOs and external aid agencies are in kind. In Cambodian education, the main financial inputs by the government are in the form of teachers and 90% of the government expenditures are largely for teachers' and administrators' salaries (Ray et al., 2010). Although all teachers are paid by the government, expenditures were not great because their salaries are very low. Average monthly salary during 2007 was approximately US$35.

The commitment of the Cambodian government to education can be seen in the increasing share of the country's recurrent budget devoted to education (Table 1). As shown in Table 1, during the mid-1990s, government spending on education accounted for less than 10 per cent of the national budget (MoEYS, 2005). This was under 1 per cent of GDP compared to 3.1 per cent for other developing countries in East Asia (Bray, 1998). In the early 2000s, the government identified education as a priority area along with health, agriculture and rural development. The prioritization of education resulted in increased recurrent budget: 13 per cent of expenditure in 2001 and more than 14 per cent from 2002 through 2005. However, the improved financial support is not without problems. Disbursement of the educational budget is unevenly distributed between quarters. It is heavily skewed towards the final quarter of the year. In 2001, 53 per cent of education's budget was disbursed in the final quarter (Turner, 2002).

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Table 1. Government Expenditure on Education from 1990s to 2000

Year	Total state budget (millions, Cambodian riel)	Educational budget (millions, Cambodian riel)	% of total	GDP (billions, CR)	% of GDP
1996	897,088	81,266	9.1	8,601	0.9
1997	932,054	84,444	9.1	9,509	0.9
1998	1,059,568	99,927	9.4	11,134	0.9
1999	1,329,956	152,263	11.4	12,417	1.2
2000	1,528,700	163,067	10.7	13,135	1.2
2001	1,707,168	221,039	12.9	13,796	1.6
2002	1,923,568	289,669	15.1	14,734	2.0
2003	1,903,638	289,946	15.2	15,531	1.9
2004	2,171,240	313,523	14.4	16,171	1.9
2005	2,418,600	353,135	14.6	19,608	1.8

Sources: MoEYS (2005), Turner (2002)

In addition to salaries, the government provides school operating budget (non-salary funding) to all primary schools in the form Priority Action Program (PAP, renamed Program Budgeting, PB introduced in 2007). The introduction of PAP/PB is a cornerstone in reforming public financial management in Cambodia. Out of the 12 PAP activities being implemented, PAP 2.1 (primary school operating budget) is the largest PAP fund that a primary school receives. It represents over a quarter of the entire PAP. As of June 2004 for the 12 PAP activities, 77 billion riels (about $19.25 million) had been allocated nationally to cover expenditures for the year 2003. Of this, 34 per cent was allocated to PAP 2 for promoting primary education quality and efficiency. PAP 2.1 is a formula-based grant. The entitlement for each primary school is equal to a fixed sum (700,000 riels) plus a number of students multiplied by per student allowance (7,000 riels). One of the benefits of PAP is the abolition of school fees, and virtually all parents interviewed during the survey support such a claim. However, this does not mean schools are not allowed to ask for contributions from parents and the community for two reasons. First, PAP does not allow primary schools to spend on expensive maintenance and rehabilitation (MoEYS, 2005). Second, PAP budgeting has often suffered from cash flow problems. Promised funds have arrived consistently late (Turner, 2002). With no regular cash flow to schools, schools have had to rely on community contributions. Without community inputs some schools would have been unable to function. For example, more than 80 per cent of the schools surveyed in this study collected contributions from parents and the community. The average value of the contribution was about R4.5 million, with a large variation across schools. Among schools receiving contributions, the average contribution is larger than PAP 2.1 funds, although when taking into account schools not receiving these contributions, the overall contribution is actually smaller. These contributions are usually the result of joint support from people in the community.

3. Data and Method
3.1. Sample

Data for this study was drawn from the questionnaire surveys of 1,655 sixth-grade students, 1,512 parents, 225 SSC members, 229 teachers, and 119 principals in 65 Cambodian rural schools in 2011. The field survey was conducted in one province located in the central part of the country. Five districts were randomly selected from a total of the eight districts within the province. To develop primary school sample, the author, with the assistance of provincial and district educational officials, prepared lists of schools with school support committees in the five districts. To this end, a total of 65 primary schools were randomly sampled. For each school, a representative sample of 225 SSC members was then selected. The sampling strategy adopted was stratified random sampling. Questionnaires for teachers and principals were distributed in each school by the author with three other assistants from district education offices who were familiar with the districts. Each

assistant was first trained on questionnaire administration, and then they conducted approximately five days of on-site data collection in each of their assigned districts. Members of school support committees were given the questionnaires asking them about the amount of community contributions raised during the last academic year, in addition to providing their personal background information. Community contributions in cash were estimated by SSC members themselves. However, community contributions in kind were excluded from the analysis since they are difficult to be estimated in monetary value. School principals, teachers, and students and their parents were also given the questionnaires asking them to provide their personal background information and to indicate whether various school facilities, learning equipment, and teaching and learning materials were sufficient for teaching and learning purposes.

3.2. Variables
Student achievement

Student achievement, the dependent variable used in this study, is measured with the average total achievement scores of students over the period of the past four months to correct for short-term fluctuations in students' scores that may be due to some reasons including student absenteeism. The total of the achievement score is 10 with the mean value 6.42, a range of 1.81 to 8.46. Descriptive statistics for all variables used in the analyses are presented in Table 2.

Educational input variables

As mentioned above, educational inputs used in this study include per-pupil funding, availability of learning materials, and school learning environment. Per-pupil funding was created by adding two main sources of funding: government budget and community donations. The fund from the government was reported by each school principal. The amount of community contribution was reported by representatives of school support committees. The total amount funding per student was calculated and coded as a continuous variable in the analysis. Learning materials was constructed from the responses to four question items: the availability of textbooks of core subjects in Khmer language and mathematics, instructional materials for use in classroom, availability of good-quality blackboards and tables and chairs. Teachers were asked to provide responses regarding the availability of these learning materials. For example, the question regarding the availability of textbooks contained Likert-type items with responses ranging from "few students having the textbook" (=1), "less than half of students having the textbook" (=2), "approximately half of students having the textbook" (=3), "almost all students" (=4), and "all students" (=5). School learning environment was measured with two indicators: teacher behavior and classroom atmosphere. Teacher behavior was measured by three question items asking students how much they agree or disagree with the following statements: "the teacher is often absent"; "the teacher is often unpunctual"; and "the teacher encourages students to study hard". Similarly, classroom atmosphere was measured by three items: whether the classroom is often in order, whether the classroom is often kept clean, and whether the classroom is often well-organized. As shown in Table 1, the average total amount of non-capital funding per student is 13,741riel with a minimum of 7,000 riels (US$1.67) and a maximum of 28,052 riels. These figures indicate that schools are different in the amount of per-pupil funding. Regarding textbook availability, the mean value of teachers' responses is close to "less than half of the students having the textbook" (m=2.18). This finding suggests that many students still do not have access to textbooks of core subjects such as math and Khmer language, which are critical ingredients in students' learning. The rate of teacher's absenteeism seems considerable. The average response to the statement "the teacher is often absent" is close to agree (mean=2.78). The mean value of teacher punctuality, which has a range of 1 to 4, is 2.13 (close to disagree), highlighting relatively low level of teacher punctuality. Similarly, the average response to the statement "the teacher is often punctual" is close to disagree (mean=2.13). The level of teacher encouragement appears to be low (mean=1.56). These results may be partly explained by low teacher salaries. Until very recently, for example in 2007, teachers receive an average monthly salary of US$35 which have been slightly increased from US$15 a month ten years ago. The salaries are extremely low by regional and international

standards. For example, the lowest salary for teachers is $150 per month in Vietnam and $200 in Thailand. The sampled schools had an average of 43 pupils per teacher. This implies that the government expenditure on teachers' salary is approximately US$ 0.81 per pupil per month, or US$ 9.72 per year. Although Hanushek's review finds no compelling support for the belief that higher salaries would lead to better quality teachers, there are many individual studies which found that excessively low teacher salaries can have a negative effect on student achievement. If teachers find it difficult to maintain their living standard, as has been documented in some cases, the results can be frequent absenteeism and low morale on their part while they pursue second jobs, leading to declining student performance (for review, see Filmer and Lindauer, 2002).

Table 2. Descriptive statistics of school background characteristics and school inputs

Variables	Description	Mean	SD
Dependent variable			
Achievement scores	Student's average total achievement scores ranging from 1.81 to 8.46	6.42	1.98
Independent variables			
Child's age	Child's age in years ranging from 9-16 years	11.81	2.75
Gender (%)	Child's sex: 0=Male (45.5%); 1=Female (50.6%)		
No. of siblings	Number of children in the household	4.81	2.16
Mother's education	Mother's educational level: 1=no schooling; 2=less than primary; 3=primary; 4=lower secondary; 5=upper-secondary; 6= higher education	3.19	1.13
Father's education	Father's educational attainment: 1=no schooling; 2=less than primary; 3=primary; 4=lower secondary; 5=upper-secondary; 6= higher education	3.77	1.07
Marital status (%)	Marital status of parents categorized into three groups: living together=87.8 ; living separately=5.6; divorced=6.6	1.21	.60
Land asset	Size of agricultural land (in hectares) owned by each household ranging from 0-23	1.67	1.03
Household income	Household average monthly income in USD 1=0-50 (61.7); 2=51-100 (20.8) ; 3=101-200 (6.0) ; 4=more than 200 (4.8)	1.40	.88
Household possessions	Number of household possessions ranging from 1 to 11	5.55	.76
School SES	A measure of general socioeconomic (SES) context of the school community classified into five categories: 1=low SES, 2= middle low SES, 3= middle SES, 4= middle-high SES, and 5= high SES	2.57	.81
Class size	Class size varied from 23 to 65 children and a mean of 43	43	.68
Teacher's age	Teacher's mean age with a range of 20-59 years	34.61	9.36
Teacher's education (%)	Teacher's educational attainment: 1= nine years of formal education lower 2=twelve years of formal education; 3=others	1.09	.86
Teacher's experience	Teacher's teaching experience: 1=0-5 years, 2=6-10 years, 3=11-15 years, and 4=more than 15 years	1.97	.69
Per-pupil funding	The average total amount of non-capital funding from both the government and community	13741	5951.31
Learning materials	Textbook availability: 1=few students have it (17.8%); 2=less than half (47.1%); 3= about half (31.1%); 4=almost everyone (3.3%); 5= everyone (0%)	2.18	.786
	Good-quality blackboards:　1=a few classrooms; 2=Less than half; 3= about half; 4=almost all classrooms; 5=every classroom	3.89	.81

	Availability of tables and chairs (how many students do not have tables and chairs):1=about half (7.8%); 2=less than half (9.9); 3=a few (13.1); 4=no one (69.2)	3.08	1.21
	Supplementary instructional materials (calculators, notebooks, globes, posters, pens, papers, color pencils and others)	2.71	.68
Teacher behavior	Asked students: how much do you agree or disagree with the following statement: 1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree	2.01	.46
	The teacher is often absent	2.78	.89
	The teacher is often punctual	2.13	.73
	The teacher often encourages student to study hard	1.56	.67
Classroom atmosphere	Asked students: how much do you agree or disagree with the following statements: 1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree	1.67	.53
	The classroom is often in order	2.72	.55
	The classroom is often clean	2.13	.72
	The classroom is often well-organized	1.88	.68

Student and family background variables

Demographic information collected from students and their parents includes child's sex, age, number of siblings, parents' educational attainment, household economic condition, family structure, and parents' educational aspirations for their child. Descriptive statistics for all these variables are presented in Table 2.

School background variables

In assessing the relationship between student achievement and educational inputs, it is desirable to control for several school background variables, including school wealth, class size, teacher's age, teacher's qualification, and teacher's years of teaching experience, which are likely to associate with both educational inputs and student achievement.

5. Results

This section presents the results of multiple regression analysis conducted to see how students' achievement scores are affected by educational inputs and other background variables. The standardized regression coefficients are presented in Table 3.

Effect of Student and Family background on achievement

Model 1 shows the relationship between students' individual and family characteristics and student achievement without educational input variables being entered into the model. Although the model itself is not the major interest in this study, it provides a base to assess the extent to which educational input variables account for the effect of individual and family background on student achievement. In general, the relationships between student achievement and students' individual and familial characteristics are straightforward. Students from more affluent families are likely to have higher achievement than those from poorer families. Maternal education is significantly related to student achievement. Family economic condition is positively associated with student achievement, although significant only at the .05 level. Parents' educational expectation is positively associated with student achievement. However, students' age is negatively associated with achievement and female students outperform their male counterparts.

Effect of Educational inputs on student achievement

Model 2 only includes educational input variables showing gross effect of educational inputs. The result

of the analysis shows that three of the six variables of educational inputs are significantly associated with student achievement. The relationship between student achievement and per-pupil funding is significant but negative (r=-.176, p<.01). Learning materials is another significant predictor of student achievement. Low teacher attendance is significantly associated with poor student achievement.

Model 3 adds individual and family background variables to Model 2 to examine to what extent the relationship between educational inputs and academic achievement is due to their mutual dependence on individual and family background. Controlling for the effect of student and family background substantially reduces the coefficients of the association between educational inputs and student achievement in Model 3. The size of the coefficient for per-pupil funding substantially decreases from .176 in Model 2 to .112 in Model 3. The association of learning materials with achievement reduces considerably as well. Although significantly reduced, however, the coefficients for both per-pupil funding and instructional materials remain significant in Model 3. Similarly, the relationship between teacher absenteeism and student achievement still remains strongly significant.

School background characteristics

Finally, Model 4 additionally controls for the effect of school background factors. With school background variables being controlled for, the effects of educational inputs are further reduced. Per-pupil funding and teacher's absenteeism are still significantly related with achievement but significant only at the .05 level. Importantly, however, the effect of learning materials remains strongly significant, although the coefficient is slightly reduced from .166 in Model 3 to .156 in Model 4. The result highlights the robust effect of learning materials on student achievement. Overall, the results indicate that learning materials is most strongly associated with student achievement.

The same model, Model 4, shows the relationship between school background factors and student achievement. Higher level of teachers' education, 12 years of formal schooling or higher, is positively related to student achievement. This contrasts with the situation where teachers have obtained lesser educational level. Nine years of formal schooling has significantly negative relationship with student achievement. The effect of teachers' teaching experience varies by lengths of time. The overall result suggests that the longest teaching experience does not necessarily appear to affect student achievement. Previous studies find that training could be more effective (for example, see Verspoor, 2003). For primary school teachers in Cambodia, it is often more cost-effective to provide teachers with more opportunity for professional training coupled with well designed in-service follow-up and support. Boissiere's review of the determinants of primary education outcomes in developing countries suggests that teachers who are trained in active child-centered methods of teaching produce better learning results, especially when it comes to the capacity of students to apply knowledge as opposed to just memorizing facts and names of concepts (Boissiere, 2004). Class size has a positive relationship with student achievement. This goes against the regular patterns of education. This finding indicates that schools with small classes are usually remote and education quality is comparatively lower. The World Development Report 2004 reviewed the class size debate worldwide and concluded that a policy of promoting relatively small class sizes (below 40 students per teacher) is not cost-effective in developing countries compared to providing more textbooks (World Development Report, 2004). 0f course, excessively large classes (above 60 students per teacher) are also unacceptable since they are detrimental to learning (Heneveld and Craig, 1995).

Table 3. Regression coefficients of educational inputs and background characteristics on achievement

	Model 1	Model 2	Model 3	Model 4
Child and Family Characteristics				
Female	.196**		.123**	.095*
Age	-.261**		-.257**	-.212**
No. of siblings	-.042		-.029	-.012

Mother's education	.132**		.092**	.090*
Household economic condition	.091*		.053	.034
Two-parent family	.028		.027	.019
Educational expectation of parents	.161**		.120**	.102*
Educational Inputs				
Per-pupil funding		-.176**	-.112**	-.093*
Learning materials		.236**	.166**	.156**
Teacher behavior				
Teacher's absenteeism		-.086**	-.085**	-.078*
Teacher's punctuality		-.046	-.037	.033
Teachers' encouragement		.038	.026	.013
Instructional climate		.067	.055	.043
School Characteristics				
School SES				.059*
Class size				.102**
Teacher's age				-.081*
Teacher's education				
9-year-formal schooling				-.117*
12-year-formal schooling				.243**
More than 12 years				.098*
Teacher's teaching experience				
0-5years				.148**
6-10years				.176**
11-15years				.132**
More than 15 years				-.050*
Intercept	8.09	4.27	7.28	8.68
Adjusted R²	.39	.33	.45	.48

**p<.01 *p<.05

6. Discussion and Conclusion

When it comes to factors affecting students' academic achievement, the present study found that, among other educational inputs, learning materials show a relatively large impact on student achievement. This finding may reflect the fact that rural primary schools have been starved of learning materials leading to their relative scarcity. This result is consistent with the finding of the studies by Hanushek (1995) and Kremer (1995) indicating the importance of learning materials for improving primary school outcomes in developing countries. This finding suggests that the development of quality education in rural areas of Cambodia is still at its initial stage. It is undeniable that in situations where rapid expansion of access is needed to achieve EFA goals, learning materials and other related school resources are sacrificed to reach numerical enrollment targets. In other words, there is a trade-off between rapid expansion and quality of inputs. The finding of this study implies that the unprecedented pace of politically-driven basic education expansion makes this trade-off a critical issue. As the experience of other developing countries has shown, going back to try to improve quality after rapid expansion with low quality is difficult and likely to be more expensive in the end (Lockheed & Verspoor, 1991).

The finding of a negative relationship between per-pupil funding and students' academic achievement was an unexpected result. Two factors may help explain this pattern. First, schools presumably differ in the amount of financial input both from the government and from the community, and that the amount of community resourcing is value-added, supplementing the funding from the government. Schools in more rural areas are usually in barren conditions; the school premises are inadequate; and there is usually a shortage of every kind of learning materials and equipment. In this sense, schools with low achievement are usually those

that are located in more rural areas and that are more likely to be poorly funded either by government or community. This indicates that the lower the students' academic achievement, the more it demands increasing level of funding. Second, higher funding per student does not necessarily translate into higher learning achievement. The impact of per-pupil funding ultimately depends on how effectively schools use the available resources to promote student learning. This points to the heart of decentralization debate demanding that all school stakeholders make decisions about the educational processes that best serve local needs. However, as the finding of this study suggests, local school stakeholders are not given opportunity to make decisions regarding the use of school fund. This is because the guidelines on school expenditures, i.e. program budgeting (PB budget), were found to be too rigid and pre-decided by the central/provincial educational administrators leaving little or no room for local school stakeholders to initiate their own priority needs. Therefore, it may be unfair to expect local stakeholders to make best decisions about the educational processes that best serve local needs, thus effecting student learning. For example, persuading school management body that each individual school needs to spend as much an amount of school operational budget on school maintenance as on teaching and learning materials while the school building is newly built is often a hard sell. The finding of the lack of discretion over how school fund should be spent by local school stakeholders is a caution that school stakeholders need an opportunity to reflect on what actions they should take on their part that might improve student learning.

References

Boissiere, Maurice. (2004). Determinants of Primary Education Outcomes in Developing Countries. Background Paper for the Evaluation of the World Bank's Support to Primary Education. OED World Bank.

Bray, M., & Bunly, S. (2005). *Balancing the Books: Household Financing of Basic Education in Cambodia.* Comparative Education Research Centre, University of Hong Kong.

Bray, M. (1998). Financing Education in Developing Asia: themes, tensions, and policies. International Journal of Educational Research, **29**, 627–642.

Filmer, D., & Lindauer, D. (2001). Does Indonesia have a low-pay civil service" Policy Research Working Paper Series 2621, the World Bank.

Fuller, B., & Clarke, P. (1994). Raising school effects while ignoring culture? Local conditions and the influence of classroom tools, rules, and pedagogy. Review of Educational Research, **64**, 119–157.

Hanushek, E. (1995). Interpreting Recent Research on Schooling in Developing Countries. World Bank Research Observer 10:2, pp.227–46.

Heneveld, W., & Craig, H. (1996). Schools count: World Bank project designs and the quality of primary education in Sub-Saharan Africa. Washington, DC: The World Bank.

Kremer, M. (1995). Research on Schooling: What We Know and What We Don't: A Comment on Hanushek. World Bank Research Observer 10:2, pp.247–54.

Lockheed, M. E., & Verspoor, A. M. (1991). Improving primary education in developing countries. Oxford: Oxford University Press (Published for the World Bank).Washington, DC: The World Bank.

Ministry of Education, Youth and Sport. (2005). Public Expenditure Tracking Survey in Primary Education. Report Number 34911-KH. East Asia and the Pacific Region: The World Bank.

Ministry of Education, Youth and Sport. (2008). Kar Bramoul Phdom Chong Krong Korkarsangkeb sdey pi Kar Baeng Chaek Kar Chamnay Kartoutort ning kar reapchom ekashar liketyuttekar samrab anuwat tavika tam kamvithi 2008. [English translation *collections of guidelines for distribution, expenditures and preparation of relevant documents for implementation of PB in 2008*] Kampong Chhnang, Cambodia.

Ray, P., Abby, R., George, T., and Khieu, Vicheanon. (2010). Cambodia Country Case Study. Mid-Term Evaluation of the EFA Fast Track Initiative. Cambridge Education, Mokoro and OPM.

Turner, M. (2002). Decentralization Facilitation: A study of decentralization in Cambodia with specific reference

to education. Australia: University of Canberra.

Verspoor, A. (2003). The Challenge of Learning: Improving the Quality of Basic Education. *Newsletter of the Association for the Development of Education in Africa* **15**, 4-7.

Willms, J.D., & Somers, M.A. (2001). Family, Classroom, and School Effects on Children's Educational Outcomes in Latin America. *School effectiveness and school improvement,* **12**, 409-445.

White, H. (2004). Books, Buildings, and Learning Outcomes: An Impact Evaluation of World Bank Support to Basic Education in Ghana. OED World Bank.

World Bank. (2004). "World Development Report: Making Services Work for Poor People."

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