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CAMBODIA SECONDARY EDUCATION STUDY:
Educational Demand in the Basic Education Sector & Strategies for Enhancement

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Demography		
Population (millions)	13.099	2001
Population under 8 (‘000)	2,019	2001
Population under 18 (‘000)	6,650	1999
% Population growth rate	2.6	1990-99
Land area (‘000 sq km)	181	1999
Density per sq km	72	2001
% urbanized	16	2001
% of adult pop. engaged in agriculture	72.4	2000
Total fertility rate per woman	4	2000
Life expectancy (male/female)	51/55	1998
Crude birth rate	34	2001
Crude death rate	10	2001
Number of births (‘000)	445	2001
Number of under 5 deaths (‘000)	55	2001
Socio-economic Environment		
GNP per capita (US $)	260	1999
GDP per capita (US $)	297	1997
Human development index	0.512	1998
Health expenditure (% gov’t exp)	9	2000
Educ expenditure (% gov’t exp)	18.5	2001
Defense expenditure (% of gov’t exp)	37	2000
Radio sets per 1,000 population	78	2000
Television sets per 1,000 population	60	2000
% female participation in labor force	64.4	2000
% male participation in labor force	66.2	2000
% chld labor force (as a % children 10-14)	11.9	1998
Official development (% of GNP)	11.9	1998
Female employment rate (%)	97.2	2000
Male employment rate (%)	97.9	2000
Debt service (% of exports)	1	1998
Education Indicators		
National NER (primary level)	0.87	2001
NER for females (primary level)	0.84	2001
National NER (lower secondary)	0.19	2001
NER for females (lower secondary)	0.16	2001
Total Primary School Repetition Rate	0.11	2001
Female Primary School Repetition Rate	0.10	2001
Total Primary School Dropout Rate	0.12	2001
Female Primary School Dropout Rate	0.13	2001
Total Transition Rate to Lower Secondary	0.83	2001
Female Transition Rate to Lower Second.	0.78	2001
National Adult Literacy Rate	0.68	1998
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Gender Parity for Enrolment at Primary	0.87	2001
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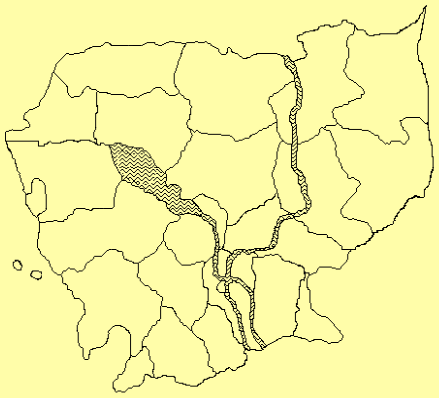
Gender Parity for Enrolment in Vocational Training Programs	0.52	1991-99



Historical Background

An estimated 2 million people (out of a prewar population of 7.5 million) were killed during the genocidal Khmer Rouge period, 1975-79. Civil War was ended in 1991 with the Paris Peace Accords. The international community spent an estimated $1.8 billion to organize national elections in 1993. A new constitution was proclaimed later that year after free and fair elections and continues to the present day. The former socialist party that expelled the Khmer Rouge is the majority party ruling in coalition with the Royalists.

Economy

Destroyed by decades of war, civil strife, political instability, and economic depletion, the infrastructure, human capital, and social services are slowly being rebuilt. GDP increased from $US 1.9 billion in 1991 to $US 3.04 billion in 1997. Nevertheless, an estimated 38% of households still live below the poverty line. The categories of poor include urban migrants, returnees from refugee camps, and families headed by young females.

Education System

Basic education comprises Grades 1-9. Upper secondary extends from Grades 10-12. Education system was virtually destroyed during Khmer Rouge era. Reconstruction has been slow and impeded by lack of human resources.

Source: Adapted from UNICEF/Cambodia

List of Abbreviations

ADB	Asian Development Bank
BEIC	Basic Education Investment Credit
EFA	Education for All
EMIS	Education Management Information System
ESSP	Education Sector Support Program
GER	Gross Enrolment Rate
GPI	Gender Parity Index
JFPR	Japan Fund for Poverty Reduction
KAPE	Kampuchean Action for Primary Education
LSS	Lower Secondary School
MoEYS	Ministry of Education, Youth, and Sport
NEP	NGO Education Partnership
NER	Net Enrolment Rate
NGO	Nongovernmental Organization
PAP	Priority Action Program
PCR	Pupil Class Ratio
RGC	Royal Government of Cambodia
SBP	School Breakfast Program
SES	Socio-economic Status
UNICEF	United Nations' International Children's Fund
WFP	World Food Program

READER'S NOTE

The opinions expressed in this document are those of the author and do not necessarily reflect those of the World Bank.

1. Background and Rationale

1.1. Introduction to the Study

With the realization of considerable progress in enhancing access to primary education, the next great frontier for the Cambodian educational system is to achieve similar success at the lower secondary school level, the second tier of the basic education cycle. The challenges of this new frontier, however, are daunting given that the vast majority of Cambodian children never reach lower secondary school. The main culprits in this saga are waning levels of student intent to finish primary school and the high level of school drop out, which begins to accelerate in the upper primary grades and reaches a crescendo at secondary school level. Surprisingly, there has been little systematic research of the dropout phenomenon at secondary school level in recent years. The last major investigation of this issue was a seminal study conducted by the Ministry of Education, Youth, and Sports in collaboration with CARE in 1998. That study focused on school completion rates at primary level with a particular focus on girls. Since then, there have been few broad investigations of primary data relating to the dropout phenomenon in the basic education cycle. In this sense the current study is very timely.

The present study is an exploratory one that is part of the World Bank's on-going work toward the development of a Framework Paper on Secondary Education, led by Ernesto Cuadra (Hdned). In parallel, it is also intended that the study should serve as an important input to the project preparation phase of the World Bank's Basic Education Investment Credit (BEIC) in Cambodia, to be implemented sometime in 2004. This project is to be implemented by the Ministry of Education, Youth and Sports in collaboration with the World Bank. Pending review of the study's results, there may also be a more thorough follow-up investigation of the causes for static participation rates at lower secondary school, particularly in rural and remote areas.

1.2. Secondary Education: Bridge or Bottleneck?

Together with its contribution to economic growth and to social capital development, secondary education is also crucial in terms of its contribution to both Primary and Tertiary Education. Within any given education system, secondary education works as the bridging or *articulation* sector between primary schooling and tertiary education institutions; in playing that articulating role, secondary education may appear to serve as a set of pathways for students' progress and advancement or, on the contrary, as the main bottleneck preventing the equitable expansion of educational opportunities. Needless to say, and despite all the efforts made in recent decades in the developing world, the secondary education sector often acts as a bottleneck within the overall education system that inhibits participation rates.

Characterization as a bottleneck is increasingly becoming the manner in which secondary education is described in Cambodia. In this respect, educational reforms have enabled net primary enrolments to increase from 85% in 1996 to a reported 93% in 2002. In contrast, net enrolment at secondary level has actually declined from 23% to 20% during the same period and was reported to have plunged as low as 14% in the 1999-2000 academic year. As the primary education sector begins to exhibit greater efficiency in flow rates to Grade 6 (particularly with respect to declines in student repetition), Government anticipates potential demand for places in lower secondary schools (LSS) to double by 2006 (MoEYS, 2003a). This could possibly cause transition rates to lower secondary to drop from a current 83% to only 40% as base enrolment figures become significantly larger. Not surprisingly, such projections have led to calls for a large array of interventions in the country's secondary education sector to accommodate accelerating flow rates through the nation's primary schools.

For Cambodia, there is also a legalistic dimension to the dilemma of static flow rates that characterize

the transition to lower secondary school as well as the high incidence of dropout for the lucky few who actually get there. In 1996, the Royal Government of Cambodia (RGC) introduced a major reform in the education sector that extended *the basic education cycle* from 6 to 9 years, through the end of the lower secondary school cycle. Because the Cambodian Constitution guarantees the right of every child to a basic education, participation rates at lower secondary schools that hover around 20% present a stark contrast to desired social and political goals. This contrast has provided a powerful stimulus for Government to translate *legal* rights into *real* rights. This stimulus has underpinned many of the efforts to introduce propoor educational reforms.

1.3. The Lessons of Educational Reform

Educational development strategies in Cambodia have recently gone through a major transformation leading to the greater prominence of demand-side approaches as an important means to improve participation rates, particularly at primary school level. During the early and middle 1990s, the country and its major donors invested millions of dollars into supply-side interventions such as textbooks, infrastructure, and teacher training only to see participation and flow rates at primary level continue to stagnate throughout this period. A number of studies highlighted this failure and provided empirical evidence relating to the inhibiting role of demand side factors (e.g., Fiske, 1995; Beecham, 1997; MoEYS-CARE, 1998; Bredenberg, 2000). A new wave of educational reforms inaugurated in 2000 shifted the character of interventions to better address these demand-side factors. As noted above, the new reforms, known generically under the name PAP (Priority Action Program), have variously been described as propoor in focus and have included the abolition of school fees, village-based remediation programs, school breakfast programs in poor areas, and scholarships for needy children (proposed). Since the reform program began, net enrolment rates have improved rapidly with corresponding improvements in efficiency and flow rates (at least with respect to student repetition).

The lessons of this period have not been lost on Government and the approach to improving participation rates at lower secondary school level have major demand-side components. This speaks especially to the inauguration of a number of nation-wide scholarship programs supported by major bilateral donors. But it is not clear to what extent the lessons learned in improving participation rates at primary level are applicable to the secondary education sector. For example, the availability of lower secondary schools in no way approaches the relative ubiquity of primary schools throughout the country, even if many of the latter comprise schools with an incomplete complement of grades. In this respect, for every lower secondary school, there are approximately 10 primary schools in Cambodia (EMIS, 2003). Moreover, there are major structural differences between the primary and secondary education sectors relating to the manner in which teachers are recruited and assigned to rural areas where the vast majority of students live. In this respect, research findings in this study suggest that while many primary school teachers are native to the areas in which they teach, this is not generally so of secondary school teachers. Thus, teacher shortages at secondary school level have tended to be much more severe leading to high rates of absenteeism (among teachers), overcrowding, and in some cases, incompetence. These problems are of a decidedly supply-side nature.

To be sure, several studies have pointed to the much greater role of direct and opportunity costs as a major inhibitor of enrolment at secondary school level than is true at primary schools (e.g., ADB-KAPE, 2002). Such costs are estimated to be higher by a margin of 10. All of this is to say that the approach employed to accelerate participation rates at lower secondary school level will likely require a combination of both supply-side and demand-side interventions. But the relationship between supply/demand side factors as well as their relative importance in impeding access to secondary education is in general not yet well understood, thereby providing a powerful rationale for the current study.

2. Scope and Focus of the Study

2.1. Core Research Question

Although a primary area of inquiry in this study centers on why so few children reach the end of the basic education cycle (i.e., Grade 9), the investigative approach to generate better understanding of this problem has not focused solely on the terminal grade level of the education cycle nor limited itself to the lower secondary education cycle itself. Rather, the study has investigated the nature of the weakening of educational demand from the time of its acceleration, largely observed to occur at the upper primary level (i.e., Grades 4, 5, and 6). An important strand of thought in this regard relates to the nature of the interaction between the primary and lower secondary education sectors and its impact on completion rates.

In spite of impressive gains in net enrolment in Cambodia's primary education sector, dropout levels at primary level have changed only marginally during the last several years. Various explanations have been offered to explain this phenomenon including the effects of overcrowding, increasing opportunity costs as children become older, and a lack of complete primary schools with Grades 1-6. Each of these explanations and many others straddle the divide between demand-side and supply-side factors.

A cause for which there has been little investigation relates to attitudinal factors about secondary education and its achievability for many young children. In this respect, the shortage of lower secondary school facilities requires significantly higher direct educational costs for transportation (e.g., purchase of a bicycle) or even boarding for those students who hope to move from their local primary school to a distant secondary school facility. In such circumstances, many families may reason that dropping out at Grade 6 or an even lower grade comes out to the same thing as dropping out at Grade 7 and saves considerable amounts of scarce family resources for direct educational and opportunity costs in the process. Thus, there may be a very important level of interaction between characteristics of the primary and secondary school sectors.

In view of the above, this study has set out to explore and state the extent of the relationship between the very existence and availability of a secondary education supply and the completion of primary/basic education. Therefore, a primary research question for the study is as follows:

> *Research Question 1: Might investments in secondary education, which focus on increasing its provision and coverage, have the effect of boosting up completion rates at primary education level?*

In practical/individual terms, this means that the very fact that a student has a realistic chance to go on with his/her studies in a (lower) secondary school, may increase his/her motivation (and the family's perceived incentives) to go on and graduate from primary school. In other words, investing in secondary education may have a direct impact in terms of achieving Millennium Development Goal #5.

As part of its investigation of the above hypothesis, the study focuses on the social views and expectations towards secondary education in Cambodia and their influence on enrollment and completion of primary education. A key aspect of the study has, therefore, been to explore how these views and expectations are influenced by the availability of secondary school places. It is believed that such information will help to illuminate how demand for secondary education is shaped, which are the major demand and supply constraints as perceived by communities and students' families, and how all this has an impact on student completion rates at the primary education level.

2.2. Ancillary Research Questions

In addition to the above core research question, there are a number of ancillary areas of investigation that the study has pursued in order to better understand why student completion rates are so low. These include the following:

> *Research Question 2: What are the roles of specific demand-side and supply-side factors in influencing basic education demand and what is the nature of their interaction?*

The study has tried to determine the nature and magnitude of the interaction between discrete supply side and demand side factors relative to the demand for education. Because participation rates begin to decline markedly starting from the upper primary grades, this investigation has focused mainly on educational demand at the lower secondary and upper primary school levels. Factors investigated in this regard include distance, socio-economic status, educational quality, curricular relevance, overage considerations, and parental education levels among others. The study has not only tried to determine the existence of relationships between demand-supply side factors and overall educational demand but also the nature of interaction, if any, between such factors. Distance between home and school provides a useful example. In this respect, the study investigates whether distance is a factor primarily embedded in a supply-side context or whether it also has demand-side dimensions. That is, do stakeholders feel that the distance problems inhibiting the attendance of school stem mainly from low availability of school and lack of infrastructure (supply-side dimension) or is it more related to an income problem (demand-side dimension) such as the inability to buy a bicycle. Similarly, do demand side factors such as parental attitudes towards school project their influence directly or are they mediated by related factors such as socio-economic status and school quality issues? These investigations of factors associated with dropout from the educational system will likely prove highly useful in formulating strategies to address the factors that depress educational demand.

Another major theme defining research activities concerns the manner in which educational demand measures vary by sex and demographic setting (urban, rural, and remote); hence the following research questions:

> *Research Question 3: How do education demand measure vary by sex in the basic education sector and what factors may contribute to any observed differences?*
>
> *Research Question 4: What is the role of demographic factors in basic education demand and what factors may contribute to any observed differences?*

Differences in educational demand have generally been observed to vary widely by sex with boys outnumbering girls in enrolment by a significant margin. In this respect, the gender parity index for enrolment at primary level is currently estimated to be 0.87 dropping to 0.63 at lower secondary school level. Differences are even more marked among rural and remote populations and among children at the higher grade levels (Bredenberg, 2003). This observed gender gap is of major importance as an expansion of the secondary education sector could serve to magnify the risk of gender inequality if no compensating interventions are brought to bear. In addition to describing in some detail how enrolment patterns differ between boys and girls, the study has also tried to determine how educational demand measures vary by sex as well as relative differences in the impact of selected supply/demand side factors. That is, do demand and supply side factors affect boys and girls equally or are there significant differences in their respective impacts? These and similar investigations include the role of gender parity index among teachers, the availability of toilets, attitudinal patterns among parents, and other factors. Using survey data from a small sample of several hundred children from selected schools, the study also tries to map out how boys and girls differ in terms of their attitudes

towards education, problems encountered in attending school, and other factors affecting educational demand.

Similar variations in participation rates and educational demand have also been observed along demographic lines encompassing urban, rural, and remote areas. In this respect, national level data indicates that NER at primary level ranges from 88% in urban areas to 71% in remote areas dropping at lower secondary school level to 32% and 1%, respectively. As in the case of differential enrolment patterns by sex, the study has again sought to map out not only how educational demand measures vary between urban, rural, and remote areas but also why. Once again, analyses have examined differences in the relative impact of demand and supply side factors on students residing in different demographic locations. These investigations have been pursued mainly in the context of survey data collected during the course of the study.

Because stakeholder consultation is an essential element in investment planning, it is important to provide channels for communities, teachers, and students themselves to give input about what kinds of interventions they think can positively affect educational participation. This study hopes to contribute to the corpus of documented stakeholder input regarding interventions through which to improve student participation in the education system. In addition, Cambodia also has experience of several demand side interventions that seek to improve participation rates at primary level and increase transition to lower secondary school. These interventions refer mainly to school breakfast and scholarship programs both at primary and lower secondary school level. The school breakfast program is a program of large scope that covers nearly 10% of all primary schools in the county. Though smaller in scale, secondary school scholarship programs operated by NGOs have now been in progress for 3 years and may also offer important insights into the relative effectiveness of such interventions. Thus, the study also briefly reviews the effects on primary and lower secondary school demand and retention that pilot programs have found in order to make some tentative observations about cost-benefit comparisons between demand and supply side interventions; hence the following research question:

> *Research Question 5: What sorts of interventions do stakeholders suggest to address inequities in educational access to upper primary and lower secondary school and to what extent have current demand-driven interventions, particularly school breakfast and scholarship programs, been effective?*

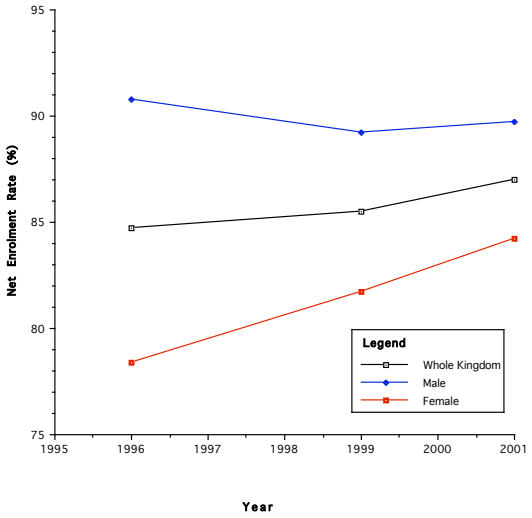
Inquiries along these lines have focused on intervention preferences reported by stakeholders, NGO program success rates, and a review of important lessons learned in program design and implementation.

3. The Strategic Context

3.1. The Increasing Demand for Education: Actual and Potential

Net enrolment rates at primary school level in Cambodia have been improving over the last several years. This increase in participation rates has been generally true of both boys and girls (though more so among girls) as well as for all demographic areas (Figure 3.1.). In this respect, total NER has increased from 84.7% to 87.0% over the period 1996 to 2001. Preliminary (though not final) estimates of NER for 2002 may have reached 93%. In all, total enrolment in the primary education sector has increased from 1.6 million to 2.7 million over the same period or an increment of 69%. The magnitude of increase has in fact exceeded government projections of 2.5 million children over the same time frame. This increase is far in excess of population increase and suggests major improvements in equitable access. However, these achievements contrast dismally with static NER at lower secondary school level of around 19% nationally and 16% for girls in 2001.

Figure 3.1: Primary Level NER, 1996-2001



Source: EMIS, 1996-2001

Internal educational efficiency has also been improving during the last several years with the higher primary grades showing small but steady increments in enrolment share (Table 3.1). For example, the total share of enrolment for Grade 6 has increased from 7.0% to 7.8% between 1998 and 2001.

Table 3.1: Change in Enrolment Share by Primary Grade, 1998-2002.

Grade	Enrolment Share (%)		
	1998-99	***2000-01***	***2001-02***
1	32.5%	30.8%	28.9%
2	21.6%	22.6%	22.1%
3	16.7%	16.8%	17.8%
4	12.6%	12.4%	13.5%
5	9.6%	9.9%	9.9%
6	7.0%	7.5%	7.8%
	100.0%	**100.0%**	**100.0%**

Source: EMIS, 1998-2001

Government statistics also report that overall primary enrolment has been increasing for the lowest income quintiles in the country with the poorest children increasing their participation levels by wide margins. Primary education enrolment growth in the lowest quintile, for example, was 9.8% in 1999, 13.9% in 2000, and 24.7% in 2001. Although no empirical evidence has been offered that demonstrates a causal link, many observers believe that propoor educational reforms have accounted for much of this increase, especially the abolition of school fees in 2000 in 10 provinces followed by nationwide implementation thereafter. To be sure, government statistics also emphasize that the students in the poorest quintiles continue to be severely under represented at lower secondary school

level, with trend analysis over the period 1999-2001 showing little or no improvement (Table 3.2). This static situation speaks largely to the higher costs, both direct and indirect, that exist at lower secondary school level as well as the lack of secondary school facilities in most communes. In this respect, only about 35% of the country's 1,624 communes have lower secondary school facilities. Because of the stark under representation of the poor at lower secondary level, some policy observers have characterized investment in secondary education as essentially "pro-rich" unless radical and immediate interventions are undertaken to improve enrolment share among low-income quintile children in the near term (MoEYS, 2003a).

Table 3.2: Enrolment Share by Income Quintile at Lower Secondary School, 1999-2001

Income Quintile	Enrolment Share (%)		
	1999	*2000*	*2001*
Quintile 1 (Poorest)	5.4%	5.5%	6.0%
Quintile 2	16.8%	16.4%	16.7%
Quintile 3	17.0%	17.1%	17.5%
Quintile 4	23.1%	22.9%	22.8%
Quintile 5 (Richest)	37.4%	38.1%	36.9%

Source: MoEYS, 2003a

In general, transition rates to lower secondary school tend to be rather high suggesting adequate congruence between supply and demand. With the exception of remote areas, these rates varied within a range of 96% in urban areas to 79% for rural areas in the 2001-2 academic year (Table 3.3). At 47%, transition rate in remote areas is significantly lower than the national rate of 82.6%. Nevertheless, these rates can be very deceiving because they represent transition among a population of children who are generally more fortunate than many of their other classmates who have either dropped out or been pushed out of the education system over the years. This refers not only to children in remote areas but also girls, minorities, and the poor. An interesting question to follow in the future will be to what extent Cambodia can sustain these high rates of transition as base enrolment in Grade 6 increases.

Table 3.3: Transition Rate to Lower Secondary School, 1999-2001

Year	*Demographic Category*	*Total Transition Rate*	*Transition Rate /Male*	*Transition Rate/ Female*
1999-2000	*Whole Kingdom*	*0.767*	*0.813*	*0.704*
	Urban	0.902	0.940	0.856
	Rural	0.722	0.775	0.647
	Remote	0.411	0.441	0.369
2000-01	*Whole Kingdom*	*.773*	*n/a*	*0.711*
	Urban	.925		0.880
	Rural	.725		0.652
	Remote	.414	.	0.462
2001-02	*Whole Kingdom*	*0.826*	*0.862*	*0.779*
	Urban	0.958	0.994	0.914
	Rural	0.787	0.826	0.736
	Remote	0.473	0.504	0.431

Source: EMIS, 1999-2001

As part of its propoor strategy to increase access to education among underserved groups, government

anticipates major growth in Grade 6 enrolment during the current decade, peaking in 2007 (Table 3.4). A combination of proposed demand and supply-side interventions are being considered to realize these projections including:

- Targeting of school feeding programs in primary schools located in poor communes
- Poverty indexing of primary school operating budgets
- Phasing out the number of incomplete primary schools through selected strategies (e.g., multi-grade teaching, teacher and director incentives, etc.)

Grade 6 enrolment projections of the magnitude suggested in Table 3.4 are expected to lead to dramatic declines in transition rate to lower secondary as base numbers increase and corresponding increments in capacity in Grade 7 fall far behind. In this respect, capacity increases assume the construction of an additional 200 Grade 7 classrooms every year. Given the projected increases in Grade 6 enrolment, transition rates could potentially fall to as low as 47% by 2006 even as the absolute number of enrollees in Grade 7 increases. This represents a very large decline from the current transition rate level of 83%. Ideally, government would like to see transition rates to Grade 7 of 100% through proposed interventions that would rely not only on infrastructure construction but also double shifting of teachers, provision of Grade 7 places in selected primary schools, and scholarships for the poor. These strategies are currently under consideration for inclusion in the government's rolling Education Sector Support Program plan (ESSP).

Table 3.4: Projected Enrolment in Grade 6 and Transition to Lower Secondary, 2001-2010

	Year	Projected Grade 6 Enrolment	Available Places at Grade 7*	Projected Transition Rate to Lower Secondary School
Actual	2001	211,108	--	
	2002	236,001	181,088	83%
Projected	2003	309,292	195,537	63%
	2004	386,638	209,985	54%
	2005	454,844	224,434	49%
	2006	511,740	238,882	47%
	2007	541,173	253,331	47%
	2008	458,410	267,779	58%
	2009	390,598	282,228	72%
	2010	358,816	296,676	83%

*Assumes 0% repetition rate at Grade 7 and construction of 200 classrooms per annum
Source: MoEYS, 2003a

3.2. The Scale and Nature of School Completion in Cambodia

Projected increases in enrolment at upper primary school level and beyond assume major improvements in school completion rates; this is a highly vulnerable assumption given their historically low levels. As trend analysis of enrolment share demonstrates, children at Grade 6 are outnumbered by those at Grade 1 by a margin of almost 4 to 1. One difficulty in assessing survival rate in Cambodia has been that data compiled for various government and agency reports are not always consistent even if the source of the data is ultimately the same (i.e., EMIS). Sometimes, these variations can be extreme. For example, Cambodia's EFA Secretariat reported the national completion rate through to Grade 5 in 1996-7 was 53.5% for boys and 47.9% for girls rising in 2000-01 to 60.9% and 57.4%, respectively (Table 3.5). A different analysis by the MoEYS Gender Working Group, however, found completion rates to Grade 5 of about half this magnitude (Figure 3.2). A common strand in these analyses, however, is that girls have lower survival rates than boys and that a very large proportion of enrolled children (anywhere between 40% and 70%, depending on the estimate used) do

not complete the primary education cycle.

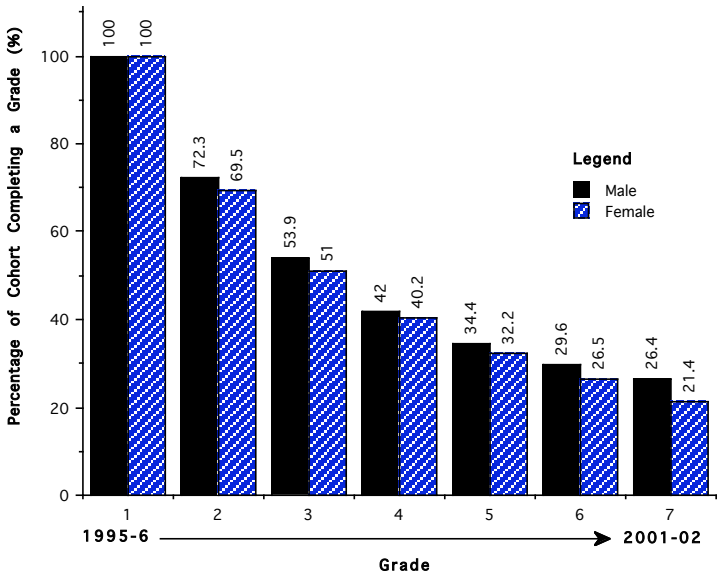
Table 3.5: Survival Rate at Primary Level through Grade 5, 1996-2000

Year	Urban		Rural		Whole Kingdom	
	Boys	*Girls*	*Boys*	*Girls*	*Boys*	*Girls*
1996-7	66.4	58.8	49.4	43.8	53.5	47.6
1997-8	62.1	58.4	43.3	37.8	47.7	42.6
2000-01	59.0	56.0	69.7	65.3	60.9	57.4

Source: EFA Secretariat, 1999, 2002

Nevertheless, future survival rates may improve to some extent in coming years if only because there have been major reductions in student repetition which dropped from 29% in 1996-7 to 11% in 2001-02. This increase in internal efficiency has been due largely to the abolition of an externally set exit examination at the terminal primary grade (1997) as well as remedial interventions targeted at the lower primary grades where student repetition has recently been most severe. By reducing the amount of time needed to move through the primary cycle, these improvements in internal efficiency may help to reduce overage enrolment and by extension, opportunity costs for schooling that occur as the value of children's labor increases with age. Still, there is great uncertainty whether government can achieve a target completion rate of 90% for the Grade 1-6 cycle by 2005 as set out in the National EFA Plan (EFA Secretariat, 2003).

Figure 3.2: Male/Female Cohort Survival Rates, Grades 1-7



Source: MoEYS Gender Working Group, 2002

An important source of concern for the 2005 Completion Rate Target stems from stubbornly high rates of dropout at the primary school level. These in turn have greatly constrained the demand for lower secondary education even if such education were more widely available. According to government data, national dropout rate levels at primary school level have changed only marginally since 1997 within a range of 14.8% to 11.4%. (Figure 3.3). Although government reports slight declines in dropout rate levels among the higher primary grades, rates have actually increased among children at Grade 1. Moreover, preliminary investigations in this study suggest that dropout levels may actually be underreported by schools in that many children who drop out during the year and later re-enroll the following year are not counted as dropouts at all but as repeaters.

Surprisingly, dropout rate levels in lower secondary school seem to be declining much more precipitously for both boys and girls than is true in primary schools (Table 3.6). In this respect, dropout levels have declined by a margin of nearly 10% since 1999 though in absolute terms, they remain much higher than at primary level. This trend is especially unexpected given that overage

enrolment as a proportion of total enrolment has been increasing in recent years (see below). To date, no satisfactory explanation has been offered to explain why dropout rates are declining in this sector. It is also important to note that boys consistently have lower dropout rates than girls at both primary and lower secondary school level. At primary level, this varies within a range of 2 to 3% (Table 3.6). In recent years, the gap has narrowed at lower secondary level to about 3% though once again, it is not clear why since large scale interventions for scholarship aid for girls are only just beginning.

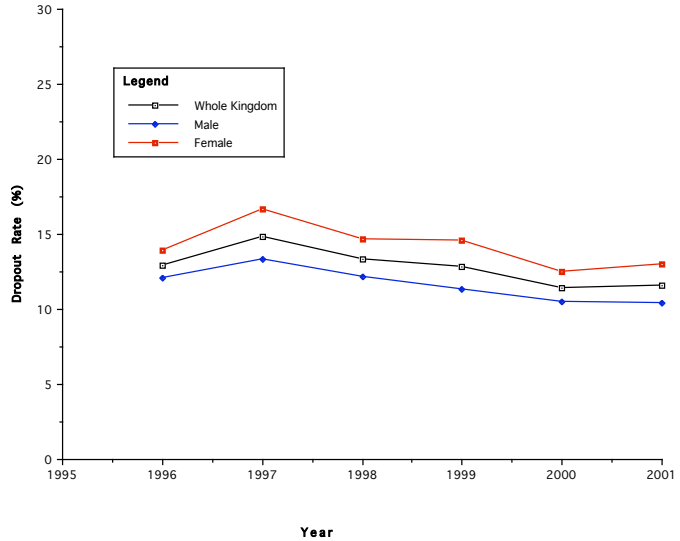
Table 3.6: Dropout Rate and Gender Gap, 1999-2001

Primary Level	Whole Kingdom	Male	Female	Gender Gap
1999-2000	12.8	11.3	14.6	3.3
2000-01	11.4	10.5	12.5	2.0
2001-02	11.6	10.4	13.0	2.6
Lower Secondary Level				
1999-2000	25.3	22.8	30.0	7.2
2000-01	22.2	20.3	25.7	5.4
2001-02	16.4	15.3	18.3	3.0

Source: EMIS, 1999-2001

Earlier research studies have indicated that supply-side factors (e.g., distance to school) tend to account more for dropout among very young children whereas demand-side factors are more important among older children (MoEYS-CARE, 1998). To be sure, government seems to be moving away from the perception that distance is a major factor in primary level dropout given that 99.2% of children reportedly live within 5 km of some kind of school (MoEYSa, 2003a). Rather, the dropout problem is believed to be more related to institutional issues such as the existence of incomplete schools (i.e., schools with fewer than 6 grade levels). According to government statistics, such schools comprise about 18% of total primary school enrolment and tend to be located in poor communes to a disproportionate degree.

Figure 3.3: Primary Level Dropout Rate, 1996-2001



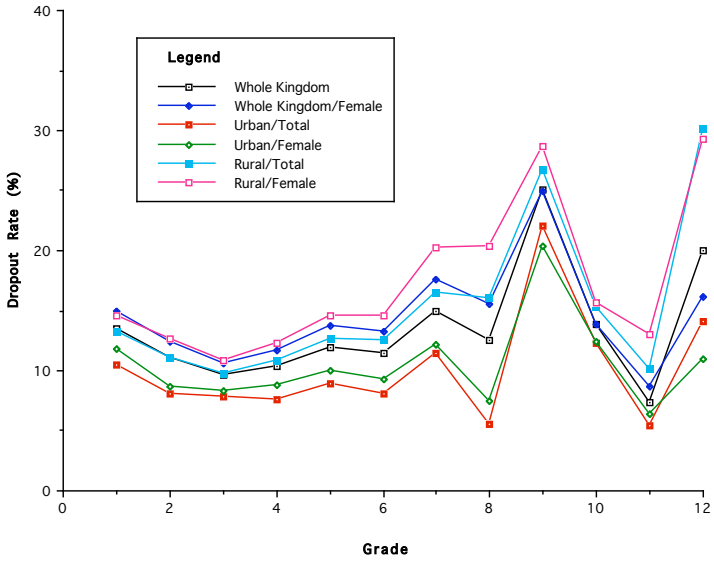
Source: EMIS, 1996-2001

Among demand-side factors contributing to student dropout, the MoEYS-CARE study cited above reported that direct educational costs seem to apply with equal frequency to both boys and girls but that indirect or opportunity costs apply more frequently to girls. In this respect, a national survey of 1,513 households in 5 provinces reported that financial factors such as lack of money were cited with comparable frequency by both boys and girls as a reason for dropping out of school (27.4% among boys vs 26.6% among girls). However, work in the household was cited more frequently among girls as a reason for dropout (8.1% for boys vs. 20.7% for girls) (1998).

Aggregated rates of dropout such as those described above should not obscure the variations that exist

during the basic education cycle from grade to grade. A study funded by the Asian Development Bank reported that dropout levels appear to spike at Grade 7 (15%), Grade 9 (25%) and Grade 12 (20%), which not surprisingly are key entry/exit points for the various educational levels (KAPE-ADB, 2001). These spiking points are shown in Figure 3.4. According to this progression analysis, dropout levels bottom out at around Grade 3 only to start rising thereafter and peaking at each of the entry/exit points identified above. A relatively new feature of dropout behavior is that it previously remained rather low throughout the lower primary grades; that is, dropout did not dip at Grade 3 but remained steady at a level well below 15%. Presumably, Grade 1 may be seeing higher dropout levels in recent years due to increased participation rates and excessive overcrowding in classrooms.

Figure 3.4: Variations in Dropout Rate by Grade, 2001



Source: EMIS, 2001

A striking feature of the dropout patterns presented in Figure 3.4 is the remarkable congruence among patterns between different demographic groupings. That is, spikes and valleys all tend to occur at the same points though levels of intensity may vary. A key though not surprising observation is that rural populations, especially girls, consistently find themselves above the national average whereas urban populations are found below.

3.3. Overage Enrolment

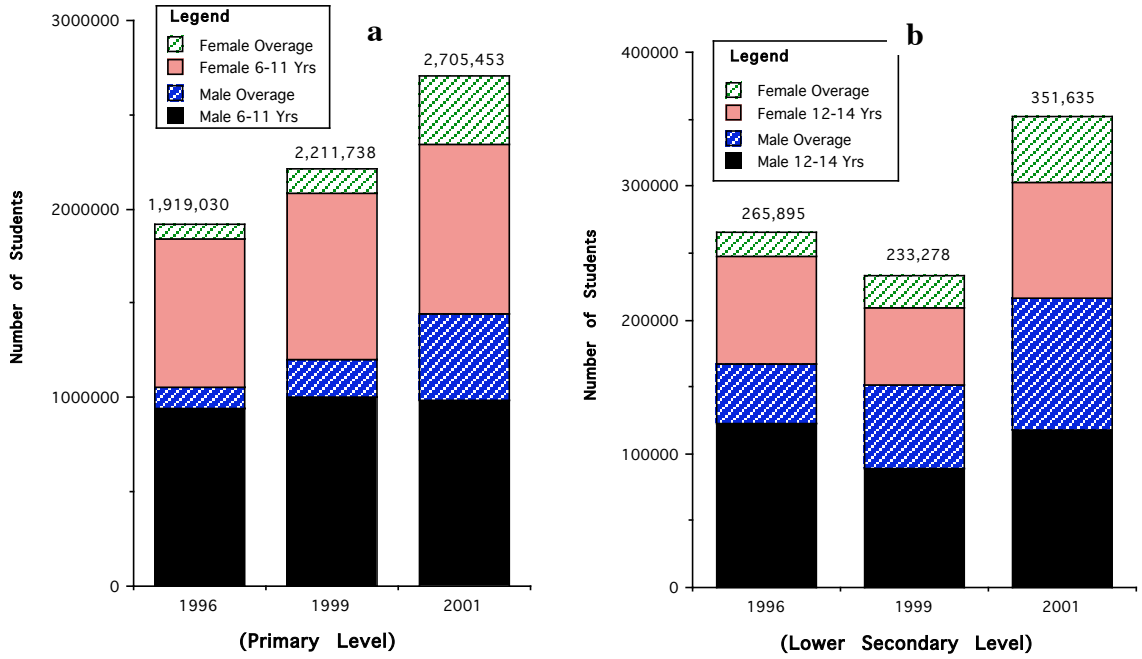
Overage enrolment is a key factor that is thought to influence educational demand, generally in a negative way. Overage enrolment is closely linked with the idea of opportunity costs associated with education, particularly at the higher grade levels. As children become older, the value of their labor either at home or in the market place increases. Thus, the proportion of overage children in national enrolment should be positively related to the magnitude of opportunity costs that society must pay for children's education. The conventional wisdom is that higher opportunities costs and by extension, overage enrolment, therefore, are likely to inhibit demand for education.

Given the above observations, it is important to note that overage enrolment has been increasing in recent years. Gross enrolment rates have been a useful indicator of the trend. For example, government reports that primary level gross enrolment has increased from 94.5% to 125.1% during the period 1996-2001; among girls, it has risen from 86.4% to 118.1%. At lower secondary school level, however, GER levels continue to be very low in comparative terms with increases from 30.5% to 32.7 % overall and 22.7% to 25.6% for girls.

An interesting characteristic of overage enrolment in Cambodia, however, is the large proportion of total enrolment that it comprises, particularly at secondary level (where the proportional total was always high), in rural and remote areas, and among boys (Figure 3.5b). These patterns have become even more pronounced over time. For example, the number of overage children enrolled in lower secondary school nearly doubled between 1996 and 2001, rising from 23.9% to 42%. In remote areas, over 62% of the enrolled students at lower secondary school are currently overage. While overage

enrolment at primary level has also increased greatly, it is a newer pattern and in any case still comprises a much smaller proportion of total enrolment in absolute terms (30.4% vs. 42% at lower secondary level) (Figure 3.5). The fact that these magnitudes are almost always greater for boys than girls corroborates other research evidence that opportunity costs associated with secondary school among older children is always greater for girls. Again, the conventional wisdom is that this factor very likely helps to depress enrolment of overage girls in comparison to boys.

Figure 3.5a and b: Overage Enrolment at Primary and Lower Secondary Level, 1996-2001



Source: EMIS, 1996-2001

3.4 Proposed Access Targets and Strategies to Increase Participation in Lower Secondary School

Currently, government and donors are providing investment in lower secondary education of about $6.8 million per annum (MoEYS, 2003b). Because of the severe under representation of the poor in lower secondary schools, much of this investment is disproportionately benefiting the richer strata of society. As noted earlier, children coming from the lowest income quintile of society represent only about 6% of total enrolment. Thus, government policy documents urge rapid action to address these inequities and increase access to the full basic education cycle through to the end of lower secondary school. Based on its long-term EFA planning, government has set out an ambitious set of targets for improved access to lower secondary (Table 3.7).

Table 3.7: EFA Access Targets for Lower Secondary School

Indicator	Actual	Year	2005/7 Targets
LSS NER (Total)	19%	2001	50%
LSS NER (Female)	16%	2001	49%
LSS Transition Rate (Total)	83%	2001	90%
LSS Transition Rate (Female)	78%	2001	88%

Source: EFA Secretariat, 2003

These targets are daunting considering that they require increasing NER by a magnitude of 2.6 in as

many years as well as eliminating the gender gap in enrolment. At the same time, the government will be severely challenged to maintain transition rates, let alone increase them, if propoor interventions and institutional reforms at primary level lead to swelling Grade 6 enrolments.

Radical targets demand radical actions and these are currently being considered in government planning documents in the very short term. In addition to increasing enrolment share at upper primary as described above, government is also considering an integrated approach of demand and supply side interventions that take in the following:

- Traditional construction of classrooms
- Rapid response facilities construction, initially at Grade 7 in underserved poor communes
- Improved utilization of existing facilities through double shifting of teachers
- Scholarships for girls and the poor

The government recognizes that traditional supply side interventions such as concrete classroom construction will not be able to accommodate the number of children finishing Grade 6 if terminal primary enrolment levels increase as projected. This will result in major declines in transition rate as base enrolment figures increase more rapidly than the number of students moving to Grade 7. To forestall this undesirable outcome, government is planning to provide grants of $3,000 to communes to build low cost buildings that could accommodate Grade 7 intake in the community in a very short period of time, counted in weeks or possibly even days. Communes can qualify for these grants if they currently have no access to a lower secondary school, are ranked as poorest quintile 1 and 2 areas, and possess high potential demand, meaning a school age population (10-14 years) of 500 or more. Communities would be expected to provide land, labor, and initial roofing to supplement the grant. This proposal is highly innovative and deserves praise for its rapid response character to meet a pressing problem.

In existing lower secondary school facilities, capacity would be supplemented not only by traditional construction but by double shifting of teachers as well. Currently, the official teaching load of a lower secondary school teacher is 18 hours per week. Additional teaching hours would be compensated by government at a rate of 2,600 Riels (about $0.50) per hour. To meet transition rate targets at Grade 7, the education system would move to a footing of 1.81 shifts per classroom in 2003/4 rising to triple shifting (3.03 shifts per classroom) by 2007. A related strategy could be to use existing primary schools to host Grade 7 classes since building utilization rates in some primary schools tend to be low in the context of morning and afternoon shifting (most teachers prefer to teach in the morning leading to vacant classrooms in the afternoon).

As a demand-side supplement to these supply-side interventions, government plans to provide scholarships to both boys and girls from poor families nation-wide starting in 2003/4. These interventions would provide subsidies of 50% of direct educational costs (such costs are estimated to be about $90 per year) to 100,000 students each year. Benefits would be disbursed through mechanisms supported by the Japan Fund for Poverty Reduction (JFPR), Belgian Aid, and the government's regular PAP disbursement channels.

While remarkable for their breadth, dynamism, and innovation, the strategies proposed above come with certain risks. The primary concern stems from the accelerated time frame proposed for each intervention and whether government would be able to meet stakeholder expectations. Given difficulties encountered in the past with very tardy financial disbursements of 6 months or more under the current reform program (PAP), skepticism is already high. Certain interventions such as scholarship programs are especially sensitive to late disbursement difficulties and there is the very real danger that allocated funds will have little impact on increasing the participation of the poorest students. Poor scholarship candidates will likely drop out early in the school year if funds are not

received promptly; that is, they will not wait 6 months or more for a payment, especially one that only covers 50% of total costs. The belief by some that the promise of such payments, even if tardy, will help motivate families to keep their children in school are generally thought to be highly unrealistic by field level observers. Relatedly, the rapid pace of implementation of government affiliated scholarship programs may lead to organizational confusion, waste, and poor coordination with existing programs. This may cause stakeholder consensus between government and NGO partners to fracture. This would be unfortunate given the warm cooperation between the two sectors in the past and the potent pool of technical assistance that civil society organizations can provide to government in the form of capacity building and monitoring.

The rapid response facilities construction intervention is prone to risk because it does not take into account the severe human resource constraints associated with staffing lower secondary schools in rural areas. Thus, building lower secondary school facilities is really the easy side of the equation. As the current study demonstrates, teachers assigned to lower secondary schools are not usually native to their areas, have to travel long distances to work, have high absenteeism, and generally do not view their jobs as permanent postings. Thus, there is the real possibility that new facilities could be left largely understaffed or unstaffed for long periods.

Improved utilization of existing facilities through double shifting of teachers may also present risks in the context of a teaching force that is already underpaid and over utilized, particularly in rural areas where working conditions are difficult. And unlike the primary school teaching force, lower secondary school teachers tend to be less compliant given their higher education and urban origins. Indeed, these teachers have set up the first independent teacher's union in Cambodia and have already initiated a number of strike actions for better pay and better working conditions. Efforts to improve utilization might, therefore, meet with fierce resistance and antagonize the teaching force. This would represent a huge political risk for government.

It is true that all reform programs are associated with some amount of risk and this can never be completely avoided. The interventions proposed each have merit but may require modification based on additional information and stakeholder consultation. It is hoped that the present document may contribute in some small way to these modifications.

SECTION SUMMARY

1. Educational participation rates differ significantly between the primary and lower secondary education sectors.
2. Because lower secondary school enrolment only comprises 6% of children from the lowest income quintile, investments in secondary education are considered to be "anti-poor."
3. Projected increases in Grade 6 enrolment are expected to lead to dramatic declines in transition rates unless rapid measures are taken to increase net enrolment in lower secondary schools.
4. Expected increases in Grade 6 enrolment are based on vulnerable assumptions that there will be significant declines in dropout rate.
5. Dropout levels at primary school level have only declined marginally during recent years and have actually increased among lower primary school children.
6. Dropout levels tend to spike at key exit/entry points in the education system including Grades 7, 9, and 12. Dropout rate patterns are remarkably congruent among different demographic groupings though levels of intensity vary.
7. Rural girls have the highest dropout rate of any demographic grouping.
8. Though overage enrolment has been increasing as a proportion of total enrolment, especially at secondary school level, dropout rates have been inexplicably dropping.
9. Proposed measures to increase lower secondary education NER include traditional infrastructure construction, rapid response construction, and scholarships for the poor.

4.1. General Sampling and Procedural Considerations

Because of the preliminary nature of the present study and the short time frame during which it was executed, the sample used is small and was selected in a nonrandom manner. These conditions notwithstanding, the researchers intensively studied 8 schools in all that are broadly representative of several different regions, particularly with respect to children at risk. This sampling design should, therefore, give some general indication about the factors affecting transition to and participation in lower secondary school in 3 distinct contexts: urban, rural, and remote settings. Three of the 8 schools were lower secondary and 5 were primary schools. In each case, the primary schools selected were feeder schools of the lower secondary schools. The researchers tried to ensure some geographical variation in the sample as follows:

Table 4.1: Sample Description

Geographical Area	Context	Province Selected	Primary School		Lower Secondary School	
			No. of Schools	*No. of Students*	*No. of Schools*	*No. of Students*
East	Rural	Kampong Cham	2	50	1	52
Central Area	Urban	Phnom Penh	2	45	1	45
West	Remote	Bantheay Meanchey	1	52	1	28
Total	**--**	**--**	**5**	**147**	**3**	**125**

When selecting the 272 students eventually used in the survey, local school officials were asked to assist in ensuring an equal balance of boys and girls in each setting. In the actual event, the sex balance in the sample was approximate with 138 boys and 134 girls participating. At primary school level, student participants were limited to Grades 5 and 6 (where dropout tends to be highest); at lower secondary school level, students from all grade levels were allowed to participate in the survey.

Efforts were also made to ensure consistent proportions of children from different socio-economic backgrounds. A written protocol was provided to provincial authorities to facilitate the selection of subjects according to these fixed guidelines (see Annex 1). To be sure, definitions of "poor" varied from context to context and the general sense of researchers was that a majority of children from schools in rural and remote areas were very poor relative to what was found in Phnom Penh.

Concurrent with student surveys, researchers also met with eclectic samples of parents (both mothers and fathers), community members, village elders, local officials, teachers, and school directors. The format of these meetings were small focus group discussions of 20 participants or less. In all, 95 teachers participated in such discussions as well as 124 community members. Tables 4.2a and b describe the breakdown of participants by location.

Table 4.2a: Teacher Sample Participating in Focus Group Discussions

Location	Primary		Secondary		Total	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
Rural	5	9	14	3	**19**	**12**
Urban	12	8	12	9	**24**	**17**
Remote	8	2	11	2	**19**	**4**
Total	**25**	**19**	**37**	**14**	**62**	**33**

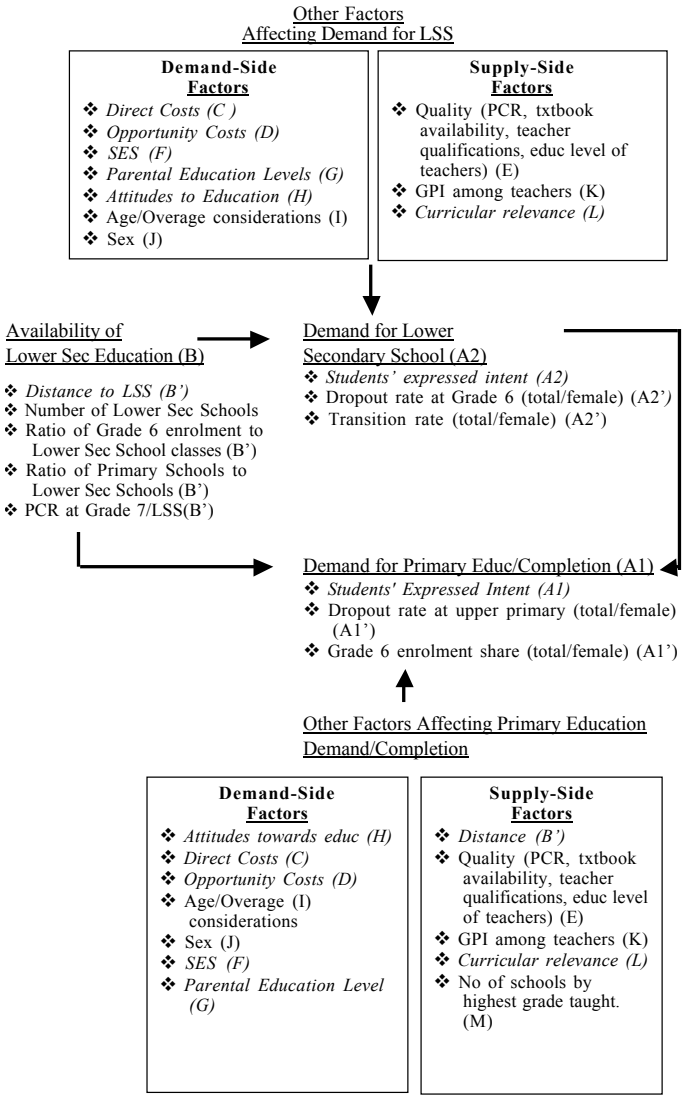
Table 4.2b: Community Sample Participating in Focus Group Discussions

Context	Mothers	Grand-mothers	Fathers	Support Committee	Monks	Village Head	Other	Total
Primary School	31	6	22	6	0	4	1	**70**
Secondary School	10	3	24	8	1	6	2	**54**
Total	**41**	**9**	**46**	**14**	**1**	**10**	**3**	**124**

4.2 Overall Design and Variables Considered

One of the overriding themes in this study has been to determine the nature of the interaction between the primary and lower secondary school sectors with respect to student demand. This refers not only to demand for lower secondary education but also to what extent availability of lower secondary education might impact on completion rates at primary school level (Research Question 1). Moreover, the study has tried to investigate the role of related demand and supply-side factors on measures of educational demand as well as any variations by sex or demographic background that may be relevant (Research Questions 2-4). The overall set of factors investigated and their supposed relationships are presented in Figure 4.1. Accordingly, demand for lower secondary and primary education emerges as the central dependent variables (Al and A2). Factors labeled B thru M represent independent variables.

Figure 4.1: Overall Research Design



Note: Factors in italics were investigated solely through student and stakeholder surveys.

The researchers sometimes found it difficult to find adequate proxy variables to operationalize such factors as *lower secondary school availability* and particularly *student demand.* These considerations partly led to the decision to utilize both national level data provided by EMIS as well as quantitative and qualitative data generated by the student/ community/teacher surveys. Some variables relied on both data sources while others relied exclusively on survey data (i.e., those expressed italics in Figure 4.1).

Separate from the above analysis, the study also examined survey data regarding stakeholder preferences for various interventions as well as reports provided by agencies that have been supporting

pilot scholarship programs at primary and secondary school level as a source of information relating to the efficacy of such interventions on promoting educational demand and useful lessons learned (Research Question 5).

4.3 Data Collection Methodologies and Instruments Used

As noted above, the study has considered both quantitative and qualitative data sets. Quantitative data has been derived from national level data provided by EMIS for the most recent year for which information is available (2001/2) as well as responses from student questionnaires filled out on site. In order to guard against the danger of *socially desirable response bias,* students were asked to complete questionnaires anonymously and with their teachers at a safe distance in the next room. During the survey, data from 278 questionnaires was collected for computer encoding. With respect to EMIS data, analyses were conducted on specific indicators in all of Cambodia's 185 districts for which data was available.

Qualitative data has been generated by focus group discussions that were conducted at each school site with students, parents, community members, school directors, and teachers. Small focus group interviews were also conducted with 18 children who had already dropped out of the education system. In all, 24 such focus group discussions were conducted with selected groups as well as 3 interviews with student dropouts from urban, rural and remote contexts.

The use of focus groups, as a research technique, was selected as a data collection strategy because it enables the emergence of the so-called *circulating* discourse in a given community or society. It allows for the contrast of positions and opinions of the participants in the group and the negotiation of different identities and social interests, all of which provides very refined and meaningful information. Of particular interest in this study, focus group discussions allowed researchers to better gauge the expectations and motivations of both children and their parents with respect to intent to continue their education as well as general attitudes towards education.

School Profiles:

Rural Schools: Two primary schools and a high school were selected in Kampong Cham Province to represent a typical rural population. The commune site for the schools is located about 60 km from the provincial capital or 45 minutes by car. One of the primary schools is an incomplete school with Grades 1 to 5 only. Children finishing Grade 5 at this school had to move to the other school used in the study in order to complete Grade 6. These two schools are 3 km away from each other. The high school used in the study was about 6-7 km away from the primary schools and was built recently by the Prime Minister. Student GPI at the high school is low at only 0.46 as is the number of female teachers. The majority of the population in the area engages in agriculture and is very poor. Village elders indicated that about 50 or 60 girls from the area had gone to work in factories in Phnom Penh.

Urban Schools: Two primary schools and a high school from a poor district of Phnom Penh were used to represent a typical urban school. One of the primary schools was about half a km from the local high school while the other was about 30 minutes away by motor cart. Although distances between schools is not great, travel conditions are made harrowing by lawless traffic conditions. Both primary schools had new but over utilized infrastructure. Students were crammed into multistory buildings confined to a small compound. Infrastructure at the lower secondary school was older but also characterized by high utilization rates.

Remote Schools: The remote sample included one primary school and a high school located near an ancient temple complex in Bantheay Meanchey Province. The high school was only about 50 km from the provincial capital but the condition of the road required a 3 hour journey to get there. Communications with the head provincial office are rare. Of the 36 teachers working at the high school, most come from other areas and 5 come from other provinces. The GPI at the high school is extremely low (0.37). Dropout at primary level is highly seasonal; many students leave for the harvest but then come back later in the school year. The official dropout rate is 8% for all grades. At high school level, dropout is high with about 20% dropping out at Grade 7 each year.

To the extent that the availability of research personnel and time permitted, the study tried to maximize the homogeneity of focus groups. Thus, primary boys, lower secondary boys, primary girls, and lower secondary girls were all interviewed as separate groups in each setting. In addition, parents from primary and lower secondary schools were also interviewed separately as were teachers in each geographical context. While male and female teachers were not interviewed as separate groupings, discussions were organized in a way such that the last question of the interview could be discussed with female teachers in private.

Survey instruments included a student questionnaire that varied slightly between primary and secondary school contexts. Most questions were closed in nature to facilitate data encoding. Focus group discussions used a structured interview format that consisted mostly of open questions. One basic interview model was developed for use with students with some variation between primary and lower secondary school contexts; another format was developed for use with teachers and parents/community members with some variation to address the specific situation of each group. All survey instruments are included in Annex 2 for the reader's convenience.

The school year in Cambodia begins in October and ends in July. Because of the late start of the study, most data collection occurred during the last month of the school year when schools were preparing for closure and many children were engaged in wet season rice cultivation. As a result, data collection activities occurred on an accelerated schedule. On average, data collection teams of 4 individuals spent 3 to 4 days in each site conducting focus group discussions, administering questionnaires and meeting with local education officials for general area briefings.

4.4 Analytical Techniques Employed

Data analysis of quantitative data has been mainly correlational in nature using Pearson's *r* to compute simple correlation coefficients to determine the nature of relationships, if any, between selected variables. In order to determine differences in responding patterns on questionnaires with reference to sex and demographic background, *Chi Square* analyses have been used. Given the preliminary nature of the study and the small sample of geographical areas, linear regressions have not been employed.

With respect to qualitative data, researchers have compiled each focus group discussion record into a composite record based on review of official notes and plenary meetings of research team members. Four composite records have been developed in this way for primary school students, secondary school students, community members/parents, and teachers. Interviews with dropouts have been similarly reviewed and compiled into short case studies and anecdotal records to highlight specific research findings.

5. Survey Findings

5.1 Overview of Findings

Overall, the research findings of this study should be able to provide some important input to policy formation, particularly with respect to interventions to address supply and demand side factors that impede educational demand at both primary and lower secondary school level. In general, demand side factors tended to come up with great frequency as factors associated with student dropout behavior. These factors include *socio-economic status, age, sex,* and *indirect costs.* With respect to parental attitude, survey results found that its role is more marginal than previously thought and that its influence tends to come into play in tandem with factors relating to financial need. In contrast, supply side factors such as educational quality were least associated with such behavior. An important caveat to these findings, however, was that the ascendancy of demand side factors applied to children who were *still* in school albeit with an earlier history of dropout. *Distance,* as a key supply side factor, maintained its primacy as a screening factor that inhibits educational demand and keeps children out of the system, particularly at lower secondary school level. *The implication of these findings is that demand side interventions are appropriate to prevent dropout among children still in school but that supply side interventions relating to increased availability of schools will be essential to increase net enrolment levels, especially at lower secondary school.*

At secondary school level, the survey found that the role of direct and indirect costs as well as age intensify greatly as factors that inhibit educational demand for children *still* in school. This was true of students in both urban and remote areas. In addition, direct and indirect costs, distance, and lack of curricular relevance appear to be factors of greater concern among girls in high school than is true of boys. At primary school level, boys and girls tended to differ in terms of concerns relating to distance, curricular relevance, the need to watch siblings, and toilet availability at school.

Examinations of national level data tended to harmonize well with in most cases with local survey data findings. For example, the presence of incomplete primary schools, low socio-economic status, and low availability of secondary schools all correlate with educational demand variables such as student dropout or transition to lower secondary school. *A finding of special importance was that gender parity among primary school teachers was significantly related to dropout patterns among girls.* This finding highlights the importance of policy level support for interventions to increase gender parity in the teaching force as an important means to improve participation rates among girls. An important exception to the general congruence between national level analyses and those conducted with local survey data related to age. Whereas overage factors related strongly with dropout behavior and declining intent to finish school in the survey, national level data did not exhibit such an association.

The investigation of the degree to which lower secondary school availability might affect educational demand at primary level yielded interesting results. While national level analyses of this question using proxy indicators for demand such as dropout indicated a rather robust relationship between availability and demand, direct measures of student intent in the survey data suggested a more cautious conclusion. *Nevertheless, survey data did indicate that a large minority of children who have little hope of finishing primary school might change their minds about doing so if it were easier to go to secondary school. This finding was particularly true of girls and children living in urban areas.*

Stakeholder groups indicated an overwhelmingly positive response towards the use of educational subsidies as a means to facilitate completion of school. This was particularly true of urban and remote populations where direct educational costs were highlighted as an important problem. Stakeholder views of school breakfast programs at primary school level also tended in general to be very positive although impact analyses suggest that enrolment levels are more amenable to change than dropout.

5.2. The Demand for Education at Upper Primary Level and Lower Secondary Education

Availability

One of the most important questions dealt with by this study focuses on the problem of low educational demand in the higher grades of the basic education cycle. As demonstrated in the previous section, completion rates at primary level are low; relatedly, dropout levels begin to rise after Grade 3 and reach a crescendo point at Grade 7. Thus, the question of how to improve educational demand through to the end of the primary education cycle is a key one. In approaching this question, the study has operationalized educational demand by looking at 3 proxy indicators, namely:

- Students' expressed intent
- Dropout rate at Grade 6 (total/female)
- Grade 6 enrolment share (total/female)

Students' expressed intent was assessed during the course of analysis of primary student questionnaire responses while dropout rate and enrolment share were examined through consideration of national level data compiled from all provinces/districts (159 of the country's 185 districts have lower secondary schools). Though Grade 6 dropout rate is really a measure of *negative* demand, it has proven useful in gauging relationships with lower secondary school availability.

Among the factors reviewed as having some association with educational demand, the issue of the *availability* of lower secondary education is an important consideration, thus bringing us back to the core research question, which seeks to determine whether investments in lower secondary education aimed at increasing its provision and coverage might boost up completion rates at primary school level. In assessing the relationship between availability and demand, the former has been operationalized in terms of the following proxy indicators:

- Distance to nearest lower secondary school
- Primary students' expressed intent to study at lower secondary school
- Number of lower secondary schools in a district
- Ratio of Grade 6 enrolment to lower secondary school classes in a district
- Ratio of primary schools to lower secondary schools in a district
- Pupil class ratio (PCR) at lower secondary school in a district

Although expressed intent to study at lower secondary school is not a direct measure of availability, it does show some indirect linkage. The assumption underpinning the use of this indicator is that given the opportunity for continued study at secondary school, personal motivation to stay in school will act as a bridge between availability of secondary education, a prerequisite of the motivation, and intent to complete primary school.

The six availability indicators above were analyzed in various combinations with indicators of educational demand with resulting correlation coefficients shown in Table 5.1. Availability was identified as the independent variable and educational demand the dependent variable. Of the 18 analyses conducted, 11 came up as having significant relationships at the $p<.05$ level. The first two analysis sets (categories 1 and 2 in Table 5.1) were undertaken using responses to questionnaires completed by Grade 5 and 6 children. Surprisingly, distance did not correlate with the level of hope that students expressed for completing primary school. This result held true even when controlling for demographic differences. However, the intent to continue one's studies at lower secondary school did have a moderate correlation with the degree to which they thought they might finish primary school. That is students who thought they would like to attend secondary school also expressed a high hope of finishing primary school. But this analysis may be reversing the natural order of events, that is, students believe they will attend secondary school because they first believe that they will be able to finish primary school. Thus, it is not clear whether the correlation validates the idea that spiking motivation to study at lower secondary (possibly through increased availability) may also influence intent to complete primary.

Among national level indicators, the number of lower secondary schools and the ratio of Grade 6

enrolment to lower secondary school classes in each district consistently exhibited significant correlations with selected measures of educational demand at primary level. Relationships with Grade 6 enrolment share were in particular strong with correlations of over 0.60. Thus, the lower the ratio between Grade 6 enrolment and lower secondary school classes (i.e., higher availability), the more probable it is that Grade 6 dropout is likely to be low and enrolment share higher. In contrast, ratio of primary to lower secondary schools and pupil class ratio at lower secondary showed only weak or no relationships with demand.

Table 5.1: Relationships between Lower Secondary School Availability and Primary School Demand

	Availability Indicator	Primary Education Demand Indicator	Correlation Coefficient	Significant (p<.05)
1	a. Distance to nearest lower secondary school (All respondents/N=147)	Level of hope student will finish primary school (Answ: A lot/A little)	0.09	no
	b. Among urban respondents (N=45)	Level of hope student will finish primary school (Answ: A lot/A little)	-0.21	no
	c. Among rural respondents (N=50)	Level of hope student will finish primary school (Answ: A lot/A little)	-0.01	no
	d. Among remote respondents (N=52)	Level of hope student will finish primary school (Answ: A lot/A little)	0.08	no
2	Expressed intent of primary school student to continue studies at high school	Level of hope student will finish primary school (Anw: A lot/A little)	0.40	yes
3	Number of lower secondary schools in a district	Grade 6 dropout rate (total)	-0.36	yes
		Grade 6 dropout rate (female)	-0.23	yes
		Grade 6 enrolment share (total)	0.63	yes
		Grade 6 enrolment share (female)	0.64	yes
4	Ratio of Grade 6 enrolment to lower secondary school classes in a district	Grade 6 dropout (total)	0.35	yes
		Grade 6 dropout (female)	0.25	yes
		Grade 6 enrolment share (total)	-0.62	yes
		Grade 6 enrolment share (female)	-0.64	yes
5	Ratio of primary schools to lower secondary schools in a district	Grade 6 dropout (total)	-0.03	no
		Grade 6 enrolment share (total)	-0.17	yes
		Grade 6 enrolment share (female)	-0.18	yes
6	Pupil Class Ratio at lower secondary school in a district	Grade 6 dropout (total)	0.09	no
		Grade 6 enrolment share (total)	0.14	no

Note: Availability Indicators 1-2: N=147; Availability Indicators 3-6: N=159

While these findings give some cause to suspect the possibility of an interactive association between availability and demand to some degree, it is important to temper such interpretations with the following observations. National level availability indicators such as Grade 6 enrolment and number of lower secondary schools may be yielding high correlations with demand factors because complete primary schools (with associated high levels of Grade 6 enrolment) and secondary schools tend to be more commonly found in urbanized areas. They may, therefore, only be suggesting alternative qualities of urban or semi-urban populations that encourage children to stay in school for longer periods of time.

The above observations notwithstanding, the results of the student survey do give some support to the notion that the findings summarized in Table 5.1 are not entirely due to the qualities of urban and semi-urban populations. Within the sample of 147 primary school students who were surveyed, 72 or 49% reported that they had little hope of finishing their primary education. When asked whether they might change their minds if it were easier to go to high school, 31 or 43% of this number answered

that they might (Table 5.2). Though less than half those responding to this question would indeed change their minds, this result still constitutes a considerable proportion of the total. To the extent that this way of thinking may reflect the general population, facilitating the provision of lower secondary school education could *possibly* affect the disposition of a sizable number of children with respect to encouraging them to continue their education. Among the children who answered "no" to this question, it is interesting to note that the majority (25 or 61%) comes from a remote area. In addition, most of the children answering "no" cited *distance* to their primary schools as the most serious difficulty that they have encountered in attending school. Because distance is a decidedly supply-side factor, its ascendance in this context helps to qualify the current conventional wisdom about the primacy of demand-side factors (e.g., opportunity costs in the work place or in the home) in inhibiting participation in the educational system in the higher primary grades.

Table 5.2: Responding Patterns among Children Not Planning to Continue Primary Education

Question: For those of you who answered [that you had little hope of finishing primary school], would you change your mind if it were easier to go to high school?	*Yes*	*No*	*Most serious difficulty or obstacle in going to school cited by those answering "no"*				
			Too far	Too many chores at home	Too expensive to study	Need to earn money	Other
Urban	12	8					
Rural	5	8					
Remote	14	25					
Total	**31**	**41**	24	8	5	3	1

Note: N=72

Discussions with student and parent focus groups were not very helpful in helping to confirm the existence of some internal psychological dynamic that depresses children's motivation to stay in school when the road to the end of the basic education seems difficult. When asked this question, most groups simply reviewed the external factors that they had cited earlier about why children leave school or fail to move on to high school (distance, costs, etc.). That is, they seemed to think of obstacles to education in inherently "external" terms rather than as internal constructs such as motivation or lack of encouragement. Another impression of interviewers was the effect of the grim struggle for economic survival on the preferred time frames of respondents. Most group members seemed profoundly unable to think of life in the long term so that questions relating to a change in behavior considerably down the pike as the result of some intervention now (exemplified by the question in Table 5.2) were not always meaningful. Rather, children and parents tended to think about the obstacles to education in very immediate terms: not enough money this week, planting starts next month, or mother needs me to watch the children tomorrow.

Overall, these findings do not provide strong support for a robust interactive relationship between lower secondary school availability and demand for primary education mainly because children and parents do not seem to make the long-term link implied by this association. There are nevertheless strong *post facto* associations between various indicators of educational demand at primary level and the existing supply of lower secondary education in a district. On the basis of this very limited evidence, one may, therefore, cautiously conclude the existence of a latent relationship between these two factors.

5.3. The Influence of Discrete Supply/Demand Side Factors on Educational Demand

One of the hopes of this study was to contribute to current knowledge about the role of supply and demand side factors with respect to educational demand. Some of the findings presented below merely provide empirical evidence for long suspected truths. Others, however, not only help to improve understanding about the relationships between supply/demand side factors on educational demand but also about how they interact with each other.

In all, the study reviewed the role of some 13 supply/demand side variables in influencing educational demand. These are summarized in Table 5.3. Educational demand, the dependent variable, was operationalized in a manner similar to that described in the previous section. Although distance and PCR were previously considered as measures of educational availability, in the present context they have been hived off to either stand as a separate variable category (as in the case of distance) or have been reclassified as quality measures (in the case of PCR). Because these surveys occurred in schools and not in households, the researchers had to be creative in formulating questionnaire items that could yield information about SES (e.g., roofing made of thatch) and parental education (e.g., Agree or Disagree: My father can read/write well).

Table 5.3: Summary of Supply-side, Demand-side and Educational Demand Variables

Variable Category		Designation	Proxy Indicators
--	Educational Demand	Dependent Variable	❑ Students' expressed intent ❑ Dropout rate at Grade 4/5/6/7/8/9 ❑ Transition rate to LSS
Supply Side	Distance	Independent Variable	❑ Km from house to school ❑ Means of transportation
	Lower Secondary School Availability	Independent Variable	❑ Ratio of Grade 6 enrolment and LSS classes
	Educational Quality	Independent Variable	❑ Agree/disagree statements ❑ Teacher education/training ❑ Ratio of textbooks to students ❑ Pupil Class Ratio (PCR)
	Curricular Relevance	Independent Variable	❑ Agree/disagree statements
	Presence of Female Teachers	Independent Variable	❑ Gender parity index
	Incomplete Schools	Independent Variable	❑ Schools w/ Grade 6 ❑ Schools w/o Grade 6
Demand Side	Direct Costs	Independent Variable	❑ Agree/disagree statements
	Indirect (Opportunity) Costs	Independent Variable	❑ Chores at home ❑ Need to earn money ❑ Need to watch siblings
	SES	Independent Variable	❑ Agree/disagree statements ❑ Roofing material of house ❑ Percentage poor in district
	Parental Education	Independent Variable	❑ Agree/disagree statements
	Attitudes about Education	Independent Variable	❑ Agree/disagree statements
	Age	Independent Variable	❑ Age of survey respondents ❑ Overage enrolment
	Sex	Independent Variable	--

In selecting an appropriate measure for educational demand for the sample of primary school students identified for the purpose of this investigation, the researchers used the response to a question regarding previous dropout behavior (Question: Have you ever dropped out of school before?). An

interesting finding during the course of this analysis was the observation that 33 students (or about 22%) indicated that they had once dropped out of school but had since re-enrolled. In Cambodia, any child who is absent or leaves school for more than 30 days is not allowed to sit for the end of year exam and is required to repeat the year. Thus, though the official designation of these children by the education system is really as repeaters (since they re-enrolled the following year in the same grade), their behavior is more akin to that of a dropout. To the degree that this sample may be representative of the general student population, it could suggest that dropout rates may be somewhat underreported

Computations of correlation coefficients for dropout behavior and selected supply/demand side factors yielded a number of significant relationships. These are summarized in Table 5.4 below. Sex (girls drop out more than boys), age (being older increases the likelihood of dropout behavior), indirect costs, and socio-economic status factors emerged as among the stronger relationships though these were all in the range of about 0.25. Parental attitudes and education also emerged as significant factors but were very weak in their association. In this respect, it may be noted that father's educational level correlated with dropout behavior but mother's did not. *Overall, with the exception of distance, demand-side factors tended to come up with greater frequency as factors significantly associated with student dropout behavior than was true of supply-side factors.*

Table 5.4: Selected Relationships between Supply/Demand Side Factors and Dropout Behavior (Primary School Survey)

Variable Category	Factor/Questionnaire Item	Correlation (p<.05)	Interpretation
SES (Proxy Indicator)	Roof material made of thatch	0.25	The more likely one's roof is made of thatch, the more likely one is to drop out.
Distance	Most difficult problem at school: Too far to go	0.22	The more likely one has cited distance as the major study problem at school, the more likely one is to drop out.
Indirect Cost	Too much work at home	0.16	The more likely a child states that studying is difficult because they have too much work at home, the more likely he/she is to drop out.
SES	School is very expensive because we are so poor	0.16	The more likely one states that school is very expensive because one is poor, the more likely one is to drop out.
Parental Attitude	My mother really wants me to study	-0.16	A positive attitude towards education by one's mother is inversely related to likelihood of dropout
Parental Attitude	My father really wants me to study	-0.18	A positive attitude towards education by one's father is inversely related to likelihood of dropout
Parental Education	My father can read/write well	-0.22	The more likely one's father can read/write well, the less likely one is to drop out.
Age	Age	-0.23	The older one is, the more likely one is to dropout
Indirect Cost	Watching young siblings	-0.25	The more likely one must watch siblings, the more likely one is to drop out
Sex	Sex of respondent	-0.26	The more likely one is female, the more likely one is to drop out.

Note: N=147; All relationships are significant at p<.05

The significant relationship between parental attitude and dropout behavior can be clarified further. In

analyzing this relationship, researchers compared student dropout behavior and their responses to the statement, "My mother/father really wants me to stay in school." Students were asked whether they agreed or disagreed with this statement. The resulting relationship with previous dropout behavior for fathers was –0.18 and –0.16 for mothers, indicating that students who disagreed with this statement tended to dropout out slightly more often than those who agreed. As pointed out above, these relationships were significant but slight in magnitude. The findings for a related question help to qualify these results. In this respect, students were also asked who is the primary decision maker when a student stays in or leaves school. A review of overall responding patterns found that most students (79%) reported that their parents rarely make the decision about whether they should drop out alone (Table 5.5). Rather, leaving school usually seems to be a collective decision by both the student and his/her parents. The marginal significance of parental attitudes towards education may, therefore, suggest that its influence tends to be latent but comes into play in combination with more dominant factors such as distance and financial difficulties.

Table 5.5: Parental/Child Decision –making Regarding Dropout among Primary School Children

Question: Who makes the final decision whether you should attend school or not?	**Responses**	**Percentage Responding**
	My parents do	15%
	I do	5%
	My parents and I do together	79%

Note: N=147

An alternative interpretation of the relative ascendancy of demand side factors is facilitated by a review of responding patterns to a question that asked children to prioritize the problems they face in attending school (Table 5.6). A tabulation of the results for this question indicated that by far the most frequently chosen response was "it is too far to go" (54%). Among the children who had once dropped out, 27 or 82% indicated this response as their most difficult problem. In comparison, demand side factors reflected by responses 2, 3, and 4 together total only 41% of respondents. Moreover, when collapsing each of the 7 possible responses in this question into either a supply or demand side category and conducting a correlation analysis with dropout behavior, the researchers found that the resulting correlation coefficient indicated a moderate relationship that favored the ascendance of supply side factors, primarily distance (-0.28). Among supply side factors, distance, therefore, seems paramount for this sample of students with respect to their educational demand. However, few children cited supply side factors relating to educational quality or curricular relevance as a problem or concern of first priority though these factors were cited as problems of secondary and tertiary priority in a range of about 3 to 12% by sample respondents.

Table 5.6: Factor Cited as the Most Difficult by Primary School Respondents in Attending School

Question: The biggest problem that I have in attending school is that:	**Problem Cited**	**Percentage Responding**
	1. it is too far to go	54%
	2. it is too expensive	27%
	3. I have too many chores to do at home	11%
	4. I need to earn money for my family	4%
	5. the quality of school/teacher is so low	0%
	6. what I learn at school does not really help me in my daily life.	1%
	7. Other	3%

Note: N=147

Analysis of the impact of supply/demand side factors on lower secondary educational demand focused

on associations with responses to the question, "How much hope do you have that you will finish lower secondary school ?[1]" Possible responses to this question included "a great deal" or "a little." Correlations with a range of supply/demand side factors yielded the results presented in Table 5.7. *All of the relationships that were found to be statistically significant in the course of this analysis were those with measures of demand side factors.* Those relationships showing the strongest correlations were those for age (i.e., younger children have more hope of finishing school) and indirect/opportunity costs (i.e., those with too much work at home were less likely to express much hope of finishing school). A major difference in these results relative to the primary school student survey is that *distance* drops out as a significant relationship with educational demand. This is presumably because most of the students for whom secondary school is too far to attend never enrolled to begin with. This confirms the conventional wisdom that distance factors impact severely on transition to lower secondary school.

To be sure, this is not to say that distance ceases to be a factor affecting demand for lower secondary education for the students who actually do enroll. In this respect, a correlation analysis between grade level and distance among survey respondents yielded a significant correlation coefficient of 0.23, suggesting that students at higher grade levels tend to live closer to their secondary school whereas more of those at lower grade levels live farther away. Similarly, an analysis of the relationship between SES and grade level yields a significant value of 0.21 suggesting that children at lower grade levels are also somewhat poorer. *Overall then, there would, therefore, appear to be a selection process at work in this student sample such that many of those who are poorer and live farther away tend not survive to the upper grade levels.*

Table 5.7: Selected Relationships between Supply/Demand Side Factors and Intent to Finish High School (Lower Secondary School Survey)

Variable Category	Factor/Questionnaire Item	Correlation Coefficient	Interpretation
Age	Age	0.36	The younger one is, the more likely one will hope to finish to high school
Parental Education	My father can read and write well	0.19	The more likely one's father reads/writes well, the more likely one will hope to finish to high school
SES (Proxy Indicator)	Roof material made of thatch	-0.22	The more likely one's roof is made of thatch, the *less* likely one will hope to finish high school
Indirect/ Opportunity Costs	Too much work at home	-0.33	The more likely one cites the problem of too much work to do at home, the *less* likely one will hope to finish to high school

Note: N=125; All relationships are significant at $p<.05$

The stronger relationship between educational demand for secondary education and age/opportunity costs shown in Table 5.7 also helps to confirm a commonly assumed link between age and the value of a child's labor. That is, the opportunity costs for older children that result from study at school tend to be greater. Once again, this result demonstrates another major point of divergence with the sample of primary school students where the role of indirect costs vis a vis educational demand was relatively weaker, albeit also significant. Children in focus groups also confirmed the existence of a social

[1] Researchers used responses to this question as opposed to dropout behavior because the latter appears to be a more permanent phenomenon at secondary school. In this respect, researchers found that school directors are much less flexible in allowing children to re-enroll after dropping out than are directors at primary school level.

pressure to leave school as they get older but noted that this pressure was linked to *noneconomic* factors as well. These noneconomic factors related especially to marriage expectations and were more likely to start at a younger age for girls than for boys. Among boys, this pressure really begins to intensify starting from the age of 17 or 18 whereas for girls, it started from the age of about 15 or 16. Secondary school students explained that the pressure started later for boys because they needed to have some kind of employment to support a family before family/peers started to put pressure on them to marry. Because traditional expectations of girls did not include a "bread earner" role, girls could marry earlier. These views were especially true of high school students interviewed in the remote area where the average respondent age was 16.5 compared with 15.8 among urban students.

An examination of the manner in which secondary school students prioritize the problems they face in attending school brings attention to the role of direct educational costs (Table 5.8). Among all students, direct costs emerge as the problem of highest priority (41%) followed by distance (21%) and various indirect costs. Collectively, indirect cost factors were chosen by 24% of student respondents. The ascendance of direct costs among student responses highlights the problem of informal fees charged by both schools and teachers at lower secondary school level. It also suggests that demand driven interventions to enhance participation at lower secondary school level are justified.

Focus group discussions with parents also helped to validate the strong role played by direct and indirect costs in demand for secondary education. For example, parent groups cited financial and overage factors as much more of a concern at secondary than at primary school level. Distance followed as a second problem of major importance, particularly in rural and remote areas though not in Phnom Penh. The major problem in Phnom Penh was the cost of tutoring where teachers seem to charge a great deal, even at primary level (unofficial charges); such charges at primary school level, however, did not seem to occur in rural and remote areas. Urban parents indicated that total annual educational costs for their children were about 400,000 riels ($100) at primary level and about 700,000 riels ($175) at lower secondary school level.

Table 5.8: Factor Cited as the Most Difficult by Secondary School Respondents in Attending School

Question: The biggest problem that I have in attending school is that:	**Problem Cited**	**Percentage Responding**
	1. it is too far to go.	21%
	2. it is too expensive.	41%
	3. I have too many chores to do at home.	9%
	4. I need to earn money for my family	15%
	5. the quality of school/teacher is so low	3%
	6. what I learn at school does not really help me in my daily life.	0%
	7. Other	10%

Note: N=125

As was generally true of primary school children, students in the lower secondary school sample tended to accept uncritically the quality of the education they receive. In a separate question than that shown in the table above, 96% indicated that they were satisfied with the quality of the education provided; only 3% cited quality issues as a major problem that they face in attending school (Table 5.8). Where criticism was expressed, it tended to come most often from urban students. In focus group discussions, however, lower secondary school students seemed to make a distinction between educational quality (i.e., their own level of learning) and the performance of their teachers. Many in rural and remote areas noted that problems of teacher absenteeism and lateness were great. Students might walk 45 minutes to an hour in order to get to school by 7 AM only to have to wait until 9 AM

for their teacher to arrive.

Teacher focus groups in rural and remote areas were candid about the above problem noting that most of them had been brought in to teach at these rural/remote high schools from different areas. At the rural high school, for example, only 4 out of 27 assigned teachers were from the local area (i.e., lived within 3 km of the school) and one teacher noted that he had to travel 30 km one way to his school; in the remote high school, teachers noted that 5 of their number had been brought in from other provinces. Although schools had provided makeshift housing for these teachers to enable them to stay overnight (and avoid a long and expensive commute), most teachers explained that the main problem for them was not lack of housing but the need to tend to alternative jobs at home to supplement their meager teacher salaries. Thus, foregoing unofficial (and illegal) fees was not a viable option them. This information highlights the difficulties facing government in that the provision of lower secondary infrastructure, even of a provisional nature, may not automatically address supply problems due to human resource constraints.

With respect to curricular relevance, lower secondary school students did express some skepticism about the value of the education they receive in terms of its pertinence to their daily lives (Table 5.9). According to survey information, only about half felt that what they were learning in school would help them later in life, especially where it concerned employment. To a large extent, many respondents did not necessarily blame the school system for this but rather emphasized the limited economic opportunities available in their communities. This was particularly true of children living in rural/remote areas. In remote communities, for example, both parents and student focus groups noted that a student who finishes secondary school had nothing else to do but to be a farmer if they decided to stay in the local area. There was, therefore, little difference in terms of economic standing between a child who had dropped out early in their schooling and one who had studied to a terminal grade level. Thus, the expenditures of time and financial resources on secondary education could only be a good investment for those who had the means and opportunity to migrate elsewhere; otherwise, such investments rarely seemed to pay off. Such perceptions tend to cast a shadow over assumptions that extending the provision and availability of lower secondary school in rural/remote communities may greatly stimulate participation rates.

Table 5.9: Secondary School Student views about Curricular Relevance

Question: Do you think that finishing lower secondary school will make it easier for you to make a living later in life?	**Response**	**Percentage Responding**
	Yes	49%
	No	51%

Note: N=125

* * * * * * * * * * * * * * * *

Correlation analyses with national level data tended to harmonize with sample survey findings in many respects (Table 5.10). For example, proxy indicators for availability at primary level (incomplete schools) correlated with proxy indicators for demand (Grade 5 and Grade 6 dropout levels), highlighting the role of distance factors in sample data. In this regard, dropout at Grade 6 was inversely related to the number of schools with Grades 1 to 6 in a district (-0.23); alternatively, the number of schools with Grades 5 or less correlated with Grade 5 dropout rate, albeit weakly (0.17). Similarly, lower secondary school availability correlated rather strongly with district transition rates, especially for female transition rates (-0.39 and –0.49, respectively). Measures of poverty in each district also showed consistently moderate levels of association with dropout levels. A curious feature

of the data, however, is that these correlations dip in value at terminal exit points (Grades 6 and 9). This may suggest that additional factors such as distance and parental attitude may start to kick in to the decision whether to move to a new school/level of education at these terminal exit points or to drop out altogether.

Table 5.10: Supply/Demand Side Factors and Educational Demand, Nat'l Level Data, 2002

Variable Category	Independent Variable	Dependent Variable	Correlation Coefficient	Significant (p<.05)
Supply Side				
Incomplete Schools	Number of schools with Grades 1-6	Grade 6 dropout	-0.23	yes
	Number of schools with Grade 5 or less	Grade 5 dropout	0.17	yes
Educational Quality	Ratio of re-usable textbooks & student enrolment	Grade 9 dropout	-0.04	no
		Grade 8 dropout	-0.22	yes
		Grade 7 dropout	-0.20	yes
		Grade 6 dropout	-0.18	yes
		Grade 5 dropout	-0.11	no
		Grade 4 dropout	-0.25	yes
	Teachers with no pedagogical training	Grade 6 dropout	0.24	yes
		Grade 5 dropout	0.27	yes
	Teachers with primary education only	Grade 6 dropout	0.33	yes
		Grade 5 dropout	0.24	yes
	PCR at lower secondary level	Grade 9 dropout	0.03	no
		Grade 8 dropout	-0.19	yes
		Grade 7 dropout	0.04	no
	PCR at primary level	Grade 6 dropout	-0.03	no
		Grade 5 dropout	-0.24	yes
		Grade 4 dropout	-0.25	yes
LSS Availability	Ratio of Grade 6 enrolment and LSS classes	Transition Rate	-0.39	yes
		Transition Rate/ Fem	-0.49	yes
Availability of Female Teachers	Gender Parity Index (Lower Secondary)	Grade 9 dropout*	-0.14	no
		Grade 8 dropout*	-0.01	no
		Grade 7 dropout*	-0.01	no
	Gender Parity Index (Primary)	Grade 6 dropout*	-0.23	yes
		Grade 5 dropout*	-0.28	yes
		Grade 4 dropout*	-0.27	yes
		Transition Rate*	0.33	yes
Demand Side				
SES	Average % of poor in a district	Grade 9 dropout	0.01	no
		Grade 8 dropout	0.29	yes
		Grade 7 dropout	0.28	yes
		Grade 6 dropout	0.16	yes
		Grade 5 dropout	0.27	yes
		Grade 4 dropout	0.20	yes
		Transition Rate	-0.26	yes
		Transition Rate/Fem	-0.28	yes
Age	Proportion of overage enrolment (Lower Secondary)	Grade 9 dropout	-0.10	no
	Proportion of overage enrolment (Primary)	Grade 6 dropout	0.04	no

Note: Primary Level Indicators – N=185 districts *Female Rates
Secondary Level Indicators – N=159 districts

An interesting new finding in this data was the level of association between educational demand and gender parity indices (GPI) among teachers. An analysis of the data found that high GPI levels correlate with lower dropout rate levels at primary school and higher transition rates to lower secondary school. Correlation coefficients in this regard varied within a range of –0.23 to –0.28 for dropout rate and reached 0.33 for transition rate. Correlations tended to be higher at the lower grade levels than at the higher ones. Indeed, GPI levels did not correlate at all with dropout rate at lower secondary school suggesting that the primary grade levels may be a key time at which to influence the decision for girls to stay in school through the use of female role models.

Because gender parity levels tend to be higher in urban areas (1.48 in urban areas compared with 0.51 in rural areas, Bredenberg, 2003), there is again the possibility that lower dropout rate levels are more a function of underlying characteristics of urban populations than of GPI per se. Yet, when looking at some provinces with large rural populations, strong associations between GPI and dropout rate level continue to hold strong. For example, Kampong Cham Province has the largest concentration of rural population of any province and indeed comprises about 20% of Cambodia's entire population. The association between GPI and dropout rate level in this province is significant at 0.74 for all districts, jumping to 0.79 when eliminating the urban population of the provincial capital. This outcome gives some confidence to the cautious conclusion that GPI levels may have some primal connection with educational demand among female students.

Case Study: A Day in the Life

Samkhan is 18 years old and is currently studying in Grade 8 at a remote high school in Bantheay Meanchey Province. His father died during the war when he was 1 year old. He is the youngest of 6 brothers and sisters. But his oldest brothers have all gone to look for work in Thailand and have been gone for 2 years now. His mother sells vegetables in the market which is the main source of family income. Every morning, Samkhan gets up at 4:30 to sweep the house, wash the dishes and get water from the local well. When he is done, he goes into the village to buy some vegetables for his mother to sell. He has to wash the vegetables and leave them with his mother. Then, he takes a shower and walks 2 km to school. If he is lucky, he may get there around 7:30 AM. He hates being late because the teacher often scolds him. He studies until 11 AM and then returns home to eat. After lunch, he has to walk back to school to study until 4 PM. If he has money, he may attend a special tutoring class for 2 baht/1hr ($0.05). Paying such fees at least part of the time may help convince his teacher to give him a passing grade. If he studies with his teacher, he may get back home around 6 PM. He then helps to prepare dinner for his mother and sisters who stay at the market until late. He takes a shower around 8 PM and then gets ready for bed around 9 PM. He may do some homework but he can't spend too much time on this because soon, it will be time for a new day.

Points of divergence between analyses of national and survey data relate to overage enrolment and quality indicators. For the former, there appeared to be no association between overage enrolment at any grade level and student dropout (correlation coefficients are provided in Table 5.10 for Grades 6 and 9 only). This may be because national overage enrolment is aggregated over all grade levels at primary and lower secondary level and is not provided by individual grade. In contrast to survey data, correlation analyses did find significant associations between selected quality indicators such as availability of textbooks and educational background/training of teachers with educational demand. These correlations were consistently significant at most (though not all) grade levels and varied within a range of 0.33 (for teachers with primary education only and Grade 6 dropout) to –0.18 (ratio of re-usable textbooks and Grade 6 dropout). Quality measures using PCR as a proxy indicator did not yield consistently significant correlations with educational demand, though where it did, it was more likely to be at the middle grade levels (e.g., Grades 4 and 5).

5.4. Variations in the Influence of Supply/Demand Side Factors According to Selected Criteria

5.4.1. Variations by Sex

As described earlier, participation rates between boys and girls have historically varied by large margins in Cambodia, especially at lower secondary school. There is, therefore, the danger that an expansion in the secondary education sector could magnify gender inequalities. In order to better understand how supply/demand side factors may differentially affect educational demand by sex, the study has examined student responding patterns in some depth on key questions. Differences in responding have been analyzed with respect to their *chi square* values in order to assess whether they are statistically significant. Points of difference (or nondifference) are summarized in Table 5.11 for all respondents.

Table 5.11: Significant Differences in Student Responding Patterns by Sex and Variable Category

Variable Category	Question Item	Significant (p<.05)	
		Primary Level	Secondary Level
Educational Demand	1. Have you ever dropped out of [primary] school and re-enrolled?	yes	n/a
	2. How much hope do you have that you will finish primary school/lower secondary school?	yes	no
	3. If you answered "no" to the above question, would you change your mind if it were easier to go to lower secondary school?	yes	n/a
	4. If you answered "no" to [Item 2], which of the following interventions would change your mind (a cash incentive/ a bicycle/a high school that was closer/none of these)	n/a	no
	5. Who makes the final decision whether you should attend school or not?	yes	no
	6. I would like to continue my studies at school next year.	yes	no
	7. If you should finish lower secondary school, do you think you will go on to study at upper secondary school ?	n/a	yes
Distance	8. I feel sad because my school is very far from my house.	yes	yes
Direct Costs	9. Going to school is very expensive because we are so poor.	no	yes
Indirect Costs	10. Sometimes, it is difficult for me to go to school because I have too much work to do at home.	no	no
	11. The biggest problem I have in attending school is that I need to earn money for my family	no	no
	12. Who spends the most time watching your younger brothers and sisters at home?	yes	yes
School Quality Issues	13. The biggest problem I have in attending school is that the quality of my school/teacher is so low.	no	no
	14. The lack of a toilet for students makes going to school difficult.	yes	no
Curricular Relevance	15. The biggest problem I have in attending school is that what I learn at school does not really help me in my daily life.	yes	yes
Attitudes	16. Boys and girls should have equal opportunity to stay in school.	no	no
	17. Usually, girls are younger than boys when they stop studying.	yes	no
	18. My mother really wants me to stay in school.	no	no
	19. My father really wants me to stay in school.	no	no
	20. It is not really important whether girls go to school or not.	no	no
	21. It is acceptable for a girl to stop studying in order to marry.	n/a	no
Parental Education	22. I believe that my mother can read and write well.	no	yes
	23. I believe that my father can read and write well.	no	no

Note: N=147 (Primary School Respondents); N=125 (Secondary School Respondents)

Among the primary school respondents, there seemed to be consistently significant differences between boys and girls on educational demand measures. Perhaps the most important of these was the margin of difference between boys and girls who had dropped out and later re-enrolled (Item 1). Among girls, 35% of respondents said that they had had this experience whereas only 8% of the boys had done so. In terms of being well disposed to finishing primary school (Item 2) or wanting to continue to study (Item 6), girls seemed more positive or motivated to continue studying than male respondents. Perhaps this is due to the fact that fewer girls would have made it as far as Grade 5 and 6 so that the less motivated ones had already been screened out whereas the opposite would have been true of boys. Among those who expressed little hope of finishing primary school, girls again were more positively inclined to change their minds (95%) if it were easier to go to high school whereas only 22% of the boys said that they would be so inclined (Item 3). This outcome, too, echoes the supposition that less motivated girls may already have been screened out of the sample.

A difference that was counterintuitive relates to variations in parental/student decision-making about staying in school (Item 5). Here, one would have expected that parents tended to be the primary decision makers for girls but that they would be more flexible for their sons. Responding patterns indicated that 21% of boys identified their parents as the primary decision-makers compared with only 8% of the girls. The majority of girls (92%) indicated that they made this decision together with their parents whereas this was true of only 68% of the boys. Nevertheless, some boys (11%) indicated that they alone made the decision to stay in school or drop out whereas no girls exhibited this degree of autonomy.

With respect to supply/demand side issues that inhibit educational participation, there was a statistically significant difference between boys and girls on a subjective assessment of the difficulties posed by distance in attending school (Item 8). More girls than boys (82% vs. 52%) felt this was a major problem for them. Among indirect costs factors, girls also tended to be the primary baby sitter for younger siblings (Item 12) than was true of boys (38% vs. 29%); otherwise, indirect cost issues did not exhibit significant differences. A similar situation held true for direct educational costs.

A finding of some interest relates to differential responding patterns about the impact of toilet availability in primary schools (Item 14). In this respect, girls were much more inclined than boys to agree with the statement that the lack of a toilet really made schooling quite difficult (89% vs. 56%). The issue of toilets has become something of a *bete noire* among programs trying to promote educational opportunities for girls. The lack of a toilet for older girls truly represents a major obstacle to study because their options are so highly limited. The survey anecdote box highlights some of the horror stories reported by survey respondents in focus group discussions.

Although few students indicated that the lack of curricular relevance was a problem of priority for them in attending school, there was a significant difference among the boys and girls who did select this response (Item 15). In this respect girls were more likely to cite lack of curricular relevance as a problem by a margin of almost two to one.

Boys and girls at primary level did not exhibit many

Survey Anecdotes:
My kingdom for a horse!

Female interviewers meeting privately with young girls reported some amazing stories regarding their behavior in schools that have no toilet or whose facilities are so poorly maintained that they are unusable. These included either "holding it in all day" or "running the gauntlet" in a rice paddy. In the latter case, some girls reported being taunted or heckled by young boys during recess. Many girls resort to the practice of dehydrating themselves so that they won't need a toilet during the day. During the hot season, this leads to a major health risk. After some visits to the rice paddies themselves, female interviewers sometimes confronted embarrassed school directors about the wretched state of their public toilets, smashing a public taboo but emboldening female teachers at the school to do the same.

differences with respect to their own attitudes or those of their parents towards education (Items 16-21). Boys and girls both cited overwhelmingly strong support from their mothers and fathers for them to continue their studies. In this regard, 92% of boys indicated that their father wanted them to stay in school and 93% said the same of their mothers; among girls, the response was similarly skewed towards a positive parental attitude with 92% reporting a positive attitude expressed by their mother and 93% saying the same about their fathers. Differences in parental education by sex were also not significant. A significant difference in responding, however, did emerge with respect to the statement, "Usually, girls are younger than boys when they stop studying." In this context, 54% of girls were inclined to agree with this statement whereas only 21% of boys thought that this was true. This finding echoes national data that indicates smaller proportions of overage girls at both primary and lower secondary school level. It also suggests a higher sensitivity and awareness of the problem among girls than boys.

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At secondary school level, there seemed to be somewhat fewer areas of difference in the manner in which boys and girls responded to questionnaire items. For example, with respect to educational demand, the primary difference related to intent to continue on to upper secondary school (Item 7). In this context, boys were more inclined to continue their studies if they could than were girls (83% vs. 57%). In their assessment of supply/demand side factors affecting their demand for education, girls were more likely than boys to say that school was too far (82% vs. 67%), too expensive (87% vs. 70%), or that the task of taking care of younger siblings fell primarily to them (23% vs. 5%). These responding patterns corroborate the conventional wisdom that direct and indirect cost factors tend to impact more severely on girls than on boys. No differences in responding emerged regarding the availability of toilets presumably because each of the high schools studied had public student toilets.

A point of consistency in responding between both primary and secondary students according to their sex relates to the issue of curricular relevance (Item 15). As was true of girls at primary school level, girls in high school were again less likely to indicate that what they learn at school would help them earn a living later in life. Only 37% of girls agreed that learning was relevant compared with 61% among boys. This finding suggests strongly fixed sex roles for women in the home and the need to possibly review/revise the curriculum as a means to make learning more attractive to girls.

Survey Anecdotes:
Now I've heard everything

Survey teams had asked local officials to request parents to attend a focus group discussion at the high school in a remote district of Bantheay Meanchey Province. The team leader had asked that mothers and fathers attend in equal numbers. On the day of the discussion, only men showed up. When asked "Where are the mothers?" one of the villagers answered, "It is too far to walk and women in our community don't know how to ride bicycles. In any case, they rarely venture far from home."

A counterintuitive finding relating to differential responding between boys and girls at secondary school level concerns parental education levels of mothers. One would expect that girls who had achieved entry into high school would by and large have mothers who were themselves highly literate. Yet, surprisingly, only 34% of girls described their mothers as having high literacy skills compared with 56% of the boys surveyed. This finding suggests that young girls in this sample have shown some independent thinking about their educational future and have not necessarily following a model provided by their mothers. It would be interesting to see to what extent this finding might hold true in a more broadly based sample of children. Focus group discussions help to shed some light on the role of mother's education. For example, parent groups indicated that mothers have tremendous influence on the decision to make their daughters stop studying, especially at secondary school. This feedback was very strong from parents in remote areas (albeit mostly fathers, see survey anecdote) but was also true to some extent of parents in Phnom Penh and the rural community studied. Mothers, even educated ones, clearly rely very heavily on their daughters to help

them at home and so feel their absence much more than do fathers. Fathers, on the other hand, have more tolerant views about the usefulness and importance of education, a view that is corroborated by correlation analyses between father's education and likelihood of dropping out (Tables 5. 4 and 5.7).

Focus groups discussions with girls both at primary and secondary school also revealed a strong preference among girls for female teachers. Female interviewers working with female groupings of students reported that girls preferred female teachers because they do not "use force", don't embarrass them with certain words, and in general are more sympathetic to their problems, especially those dealing with hygiene and health issues. Male interviewers in male student groupings, on the other hand, reported that boys tended to express no sex preference with regard to their teacher. These findings further validate earlier correlations between high GPI values among teachers and low dropout rates among girls and provide additional support for the recommendation to use female role models as a means to increase female participation rates.

5.4.2. Variations by Demographic Setting: Urban, Rural, Remote

As was noted in an earlier section of this study, there exist major variations in participation rates according students' demographic origin. In this regard, we have seen how participation rates tend to drop precipitously in rural and especially remote areas. These differences stem not only from limited availability of educational provisions in these areas but are also due to inherent characteristics of the socio-cultural milieu in these areas. The present section has tried to document in some detail what the more salient features of these differences are as well as review some possibilities of why these differences exist. The study reviews these differences in referring to *chi square* analyses of student survey findings as well as focus group discussions.

A summary of the significant differences among demographic groupings along various educational demand and supply/demand side parameters is provided in Table 5.13 below. Many of the differences that are significant are not surprising, especially with regards to educational demand. For example, urban students are less prone to drop out than those in remote areas (Item 1) and have much higher hopes of finishing school (Item 2). There are also significant differences of an unsurprising nature with respect to distance from school (Item 8: e.g., urban students live closer to school) and parental education levels (Items 23 and 24: e.g., urban parents have higher levels of literacy).

Table 5.12: Factor Cited as the Most Difficult by Respondents from Different Demographic Locations in Attending School (Secondary School Level)

Question: The biggest problem that I have in attending school is that:	**Problem Cited**	**Percentage Responding**		
		Urban	***Rural***	***Remote***
	1. it is too far to go.	17%	29%	11%
	2. it is too expensive.	54%	23%	54%
	3. I have too many chores to do at home.	2%	15%	7%
	4. I need to earn money for my family	4%	27%	11%
	5. the quality of school/teacher is so low	2%	4%	7%
	6. what I learn does not really help me in my daily life.	0%	0%	0%
	7. Other	17%	2%	11%

Note: N=125 (Urban: 45; Rural: 52; Remote: 28)

While not surprising, the significant differences in Item 5 are interesting and deserve some discussion. Among secondary (though not primary) school students, there seems to be a profound difference with respect to the role of parents in deciding whether a child stays in school or not. At this level of education, 46% of remote students reported that their parents were the ones who decided whether they

should continue their studies or not compared with 26% of urban parents and 37% of rural parents. One's initial conclusion is that this may be due to distance factors. But because many remote students drop out before reaching secondary school (often due to distance), those who have made it this far (i.e., such as the survey respondents currently enrolled in secondary school) tend no longer to cite distance as one of their major problems. Rather, the major problem among remote students appears to be financial (see Table 5.12) which may help to explain the dominant role of parents who are largely poor. According to survey data, 54% of remote respondents cited direct educational costs as the main

Table 5.13: Significant Differences in Student Responding Patterns by Demographic Setting and Variable Category

Variable Category	Question Item	Significant at p<.05	
		Primary Level	Secondary Level
Educational Demand	1. Have you ever dropped out of [primary] school and re-enrolled?	yes	n/a
	2. How much hope do you have that you will finish primary school/lower secondary school?	yes	yes
	3. If you answered "no" to the above question, would you change your mind if it were easier to go to lower secondary school?	yes*	n/a
	4. If you answered "no" to [Item 2], which of the following interventions would change your mind (a cash incentive/ a bicycle/a high school that was closer/none of these)	n/a	no
	5. Who makes the final decision whether you should attend school or not?	no	yes$^{\Psi}$
	6. I would like to continue my studies at school next year.	no	yes
	7. If you should finish lower secondary school, do you think you will go on to study at upper secondary school ?	n/a	yes
Distance	8. I feel sad because my school is very far from my house.	yes	yes
Direct Costs	9. Going to school is very expensive because we are so poor.	yes	no
Indirect Costs	10. Sometimes, it is difficult for me to go to school because I have too much work to do at home.	no	yes
	11. The biggest problem I have in attending school is that I need to earn money for my family	no	no
	12. Who spends the most time watching your younger brothers and sisters at home?	yes	yes
School Quality Issues	13. The biggest problem I have in attending school is that the quality of my school/teacher is so low.	yes	no
	14. The lack of a toilet for students makes going to school difficult.	yes	no
Curricular Relevance	15. The biggest problem I have in attending school is that what I learn at school does not really help me in my daily life.	no	no
Attitudes	16. Boys and girls should have equal opportunity to stay in school.	yes	no
	17. Usually, girls are younger than boys when they stop studying.	yes	yes
	18. My mother really wants me to stay in school.	yes	no
	19. My father really wants me to stay in school.	yes	no
	20. It is not really important whether girls go to school or not.	no	yes
	21. It is acceptable for a girl to stop studying in order to marry.	n/a	no
Parental Education	22. I believe that my mother can read and write well.	yes	yes§
	23. I believe that my father can read and write well.	yes	yes

Note: N=147 (Primary School Respondents); N=125 (Secondary School Respondents)

*significant at p<.10; $^{\Psi}$significant at p<.08; §significant at p<.07

problem that they encounter in attending lower secondary school. While urban students also identify this as the major factor for them (54%), due presumably to the very high tutoring costs mentioned by

parental focus groups, parents are either more inclined or better equipped to deal with this problem. Indeed, among the remote students, 62% reported living in thatch roof homes (a sign of major poverty). Because there are no significant attitudinal differences between urban, rural, and remote parents who have children studying at secondary school with respect to their disposition towards education (Items18 and 19), one can reasonably infer, therefore, that it is economic factors that spur remote parents to have such a major role in decision making as implied in Item 5. *This suggests that demand side interventions (such as scholarships and school subsidies) may be most appropriate for a large number of students already enrolled at secondary school (though vulnerable to dropout due to financial considerations) but that supply side interventions will still be required to boost participation for those who leave the system at Grade 6 or before.*

Another response pattern displayed in Table 5.13 that might also have great import for policy making relates to Item 3 (i.e., "[W]ould you change your mind [about finishing primary school] if it were easier to go to lower secondary school?"). The differential responding pattern to this question implies that interventions at primary school level which seek to increase the availability of schools or provide scholarships would be most effective with urban children, 60% of whom indicated they would change their minds.[2] This compares with only 36% of rural children and 38% of remote children who would change their minds if interventions were provided that opened a clear path to lower secondary school. These results suggest that such interventions in remote and rural areas may be somewhat muted in impact. As was noted earlier, focus groups in rural and remote areas stressed the problem of scarce economic opportunity in their communities as a major factor that figures prominently in decisions to stay in school or drop out. That is, many students and parents did not see the provision of education as helping them later in life in terms of their livelihood. These statements emphasize the need to consider education policy in a whole context and not in a social/economic vacuum.

Composite Case Study:
Not a Bowl of Cherries

A focus group discussion with 8 children (7 girls and a boy) who dropped out of primary school in a Phnom Penh suburb indicated that life for children in the city is not always as cheery as educational statistics sometimes suggest. Most were between 15 and 19 years old and came from single parent households. Throughout a tearful interview, they told stories of large families living in substandard housing, chasing nickels and dimes for the next meal, grinding poverty, and grim stories of unrelenting chores from sunrise to sunset. The opportunity costs of schooling seemed to be the resounding theme of the interview. Short of divine intervention, their fates in life, or at least at school, seemed to be sealed.

Among attitudinal issues (Items 16-21), differences between demographic categories tended to emerge more consistently among primary school children than among those in lower secondary school. This is likely the result of a previously mentioned screening effect that creates a special unrepresentative minority of fortunate teenagers at secondary school level who share little in common with their peers who dropped out. To be sure, although significant, many of these points of contrast represent small magnitudes of difference. For example, differential views expressed by students about their parents' views of their education (Items 18 and 19) differed in magnitude within a range of 98% (for mothers) and 100% (for fathers) among urban children compared with 85% to 87% (for mother/father, respectively) among remote children. These are not large differences and indeed suggest uniformly strong support among parents for primary education regardless of place of origin.

The view that girls stop studying at a younger age than boys (Item 17) was particularly different between urban children and those in rural and remote areas. In this instance, only 16% of urban children agreed with this view compared with 32% of rural children and 62% of remote children. Secondary school students indicated similarly divergent views with magnitudes of 17% among urban

[2] The differences between groups are significant at $p<.10$.

students vs. 31% and 75% among rural and remote populations, respectively. These responding patterns represent very different school attendance norms among girls between city and countryside.

In closing, it is important to note that in spite of national data showing 99% of children live within 5 km of a school as explained in an earlier section, many children may still feel that distance remains as a paramount problem for them. Though they only comprise a very small sample, it is certain that the students consulted in this survey do not represent the 1% of children who live more than 5 km from a school. Nevertheless, a large majority of upper primary school respondents in rural and remote areas indicated that the problem of highest priority for them was still *distance* (Table 5.14). According to survey data, 72% of rural respondents expressed this view as did an astounding 81% of remote primary school children. For urban children, the major problem cited relates to direct educational costs including transportation, stationery, uniforms, and especially tutoring fees. About two-thirds of urban children selected this issue as their highest priority problem. As in results presented earlier, indirect costs and supply side issues dealing with quality and relevance maintain uniformly low levels of magnitude and tend not to be significantly different between areas (e.g., Item 15 in Table 5.13). To be sure, indirect cost issues such as Problems 3 and 4 were cited as a second priority issue by 60% of urban children, 38% of rural children, and 56% of remote children. Parent groups also consistently highlighted the role of chores at home as a major factor in inhibiting student attendance of school. Thus, though not ascendant, indirect cost issues do still represent an important concern among upper primary school children.

Table 5.14: Factor Cited as the Most Difficult by Respondents from Different Demographic Locations in Attending School (Primary School Level)

Question: The biggest problem that I have in attending school is that:	**Problem Cited**	**Percentage Responding**		
		Urban	***Rural***	***Remote***
	1. it is too far to go.	2%	72%	81%
	2. it is too expensive.	67%	14%	6%
	3. I have too many chores to do at home.	16%	8%	10%
	4. I need to earn money for my family	9%	2%	2%
	5. the quality of school/teacher is so low	0%	0%	0%
	6. what I learn at school does not really help me in my daily life.	2%	2%	0%
	7. Other	4%	2%	1%

Note: N=147 (Urban: 45; Rural: 50; Remote: 52)

5.5. Stakeholder Views regarding Appropriate and Current Interventions Designed to Promote Participation

5.5.1. Student, Parent, and Teacher Views regarding Appropriate Interventions

Cambodia is on the verge of implementing a large series of nation-wide interventions designed to promote transition to lower secondary school. These are described in some detail in Section 3.4. Proposed interventions take in a balance of supply side interventions such as traditional type construction of infrastructure and rapid response construction for poor, high demand communes as well as demand side interventions such as scholarships for girls and the poor. Some of these interventions are based at least in part on the experience of small-scale NGO programs and their associated communities; others are characterized by a scale and rapid time frame for implementation that have permitted less stakeholder consultation or have not been able to incorporate some of the quality control measures of existing programs. This is particularly true of scholarship programs where stakeholder consensus with government has been positive but cautious about certain design features that use cash incentives as opposed to support in kind.

Among student respondents already in secondary school but whose continued enrolment is tenuous, there is a very strong preference for cash incentives (Table 5.14). According to survey data, 48% of the students responding to a question about appropriate interventions to help them stay in school chose the option of a cash incentive of 180,000 riels ($45) or more. This is also the size of the incentive to be provided by government-supported scholarships, planned for implementation in 2003/4. The student preference for cash incentives was consistently strong across most demographic groupings with the exception of rural students whose preference was evenly spread across each proposed option. Urban students in particular chose this option in large numbers, no doubt due to the high tutoring costs in the city. In considering the survey results in Table 5.15, it is important to remember that these are responses of students who have already enrolled in high school, a majority of whom may have been able to enroll because distance concerns were not a major issue. This no doubt helps to account for the lower preference for supply side interventions.

Table 5.15: Differential Responding among Secondary School Students about Intervention Preference

Question: If you answered [that you had little of hope of finishing high school], which of the following interventions would make you change your mind ? (Choose only one)	**Responses**	**Percentage Responding**					
		Total	***Male***	***Female***	***Urban***	***Rural***	*Remote*
	A cash incentive (180,000 riels or more)	48%	43%	53%	69%	31%	54%
	A bicycle	24%	19%	29%	6%	31%	27%
	A high school that was closer	25%	32%	18%	25%	31%	19%
	None of these	3%	5%	0%	0%	7%	0%

N=71 (students answering that they had little hope of finishing high school)

Among other stakeholders, there was also a strong endorsement of demand side interventions such as scholarships. In something of a role reversal, teachers put forth subsidies for students as a front line strategy supplemented by expansion of infrastructure/facilities whereas parent group in some areas, particularly urban ones, tended to advocate a reverse strategy. This often seemed to contradict what some parent groups had indicated about the primacy of direct and indirect costs as a factor that leads to student dropout. Parents in remote schools, however, advocated subsidies over infrastructure, focusing in on the costs of education. This tends to fit with student survey results in which remote students cite direct educational costs as their biggest problem (54%). When queried further about why distance and paucity of infrastructure were not their primary concern, many parents seemed to feel that subsidies

could help buy bicycles to address this issue. In addition, they pointed out that secondary school infrastructure in their communities was often underutilized and that government had not been able to adequately staff the schools that had already been provided. Thus, remote parents tended to view the provision of bicycles as an intervention that helps to address both financial considerations as well as distance/infrastructure concerns. Among urban parents, however, most felt that bicycles were largely impractical due to traffic concerns.

Teachers as a group tended to overwhelmingly endorse scholarships as the most important intervention that government could support to increase participation rates at both primary and secondary school level. They further added that they thought that this should be provided mostly as assistance *in kind* rather than as cash payments citing high risks that such payments would not be directed towards educational costs. Teachers also pointed out the extremely high costs of secondary education at Grade 9 when students must study for the national exam, causing direct costs to mushroom to over 1,000,000 riels per year ($250) mainly for tutoring charges, not to mention constant opportunity costs. Scholarship interventions could, thus, be very relevant to these needs.

5.5.2. NGO Stakeholder Views regarding Scholarship Interventions

Educational interventions supported by NGOs to increase transition to high school refer primarily to scholarship programs for poor children. Scholarship programs operated by NGOs are very small in scale and nationwide cover upwards of 8,000 to 10,000 children at both upper primary and secondary school level in selected locations (KAPE-ADB, 2001). At secondary school level, cooperation between NGOs and government has so far been very close with the former currently providing extensive capacity building and monitoring support to government in implementation of a nation wide scholarship program for girls (supported by Asian Development Bank-Government of Japan).

In general, most NGO programs report very high success rates of 90% or more, meaning that a majority of those selected for scholarships have not dropped out of the program (e.g., NEP, 2003, UNICEF, 2002, KAPE, 2002). Nevertheless, older NGO programs at secondary school level that have been operating for 3 years or more report that dropout rates tend to accelerate in the higher grades. For example, one program for poor girls reported that its first cohort of beneficiaries sustained dropout of only 2% at the end of the first year of intake but had sustained levels of 17% by the middle of the third year (i.e., Grade 9) and that most of this dropout had occurred within the prior 6 months (KAPE, 2002). Program managers have identified *financial fatigue* on the part of very poor families (who still have to bear the burden of opportunity costs) as one major factor for these trends as well as a sense of *futility* as the end of the basic education cycle approaches with no certainty about the next step (most program aid ceases at the end of the basic education cycle). In addition, direct costs for education increase substantially in Grade 9 as teacher focus groups have also reported.

NGO programs have amassed a very useful corpus of information about effective implementation strategies for scholarship interventions. These include the following:

- Program Costs: Primary level scholarship programs are considerably cheaper due to lower opportunity costs for parents as well as lower direct costs. At secondary school level, direct educational costs increase by a magnitude of 10 comprising mainly expenditures for transportation and informal charges by teachers and school directors.
- Aid to Beneficiaries: Most programs have reported that optimum results occur when providing for the full cost of schooling; partial subsidies are viewed as entailing much higher risk for beneficiary retention, particularly where it concerns high risk children. In addition, program managers report that providing benefits in kind are more effective than cash payments where there is little guarantee that cash will be used for supposed educational costs. This experience tends to confirm the opinion of teacher focus groups as well. Finally, NGOs have indicated that

provision of diverse beneficiary packages that accommodate different student needs will enhance potential program success rates. Interventions entailing a "one size fits all" approach are highly risk prone.

- Attitudinal Factors: Attitudinal factors among parents play less of a role in beneficiary retention at primary level than at secondary level. To some extent this contradicts research findings in this study, which did not find a significant relationship between parental attitudes and educational demand measures at secondary school level. But given the context that this analysis was applied to students already enrolled in school and not those at the point of transition to secondary school, these findings may not necessarily be at odds with the experience of scholarship programs. Indeed, the earlier finding that attitudinal factors do play some role at upper primary level (at the point before entry to secondary school) may confirm this experience. In addition, scholarship programs have reported that attitudinal factors generally tend to play a role in affecting educational demand in tandem with financial factors that require a harsh resource allocation decision, usually to drop out of school. Otherwise, parental attitudes towards education are not usually hostile.
- Program Management: Implementation strategies that rely on local committees with representation from parents, directors, and teachers tend to be the most optimal management arrangement. These committees help to bring transparency to selection processes that are potentially very acrimonious affairs in local communities. Nevertheless, stakeholders in local committees demonstrate considerable variability in their commitment to programs, particularly at secondary level where schools have less accountability to local communities.[3] Left to themselves, school members on these committees tend to dominate program operation unless community members are chosen wisely.
- Targeting and Selection: The selection process in scholarship programs tends to be the weakest link in program implementation procedures even with the solicitous oversight provided by participating agencies. In order to ensure that the highest risk children are targeted in a transparent and credible manner, most programs have developed standardized interview instruments that are then scored according to socio-economic status. Students are subsequently selected based on a cut-off point that is usually linked to the availability of budgetary resources.

Currently proposed scholarship programs to be implemented nation wide diverge in significant ways from many of the lessons learned from smaller NGO programs. In this respect, national programs tend to be based on unitary beneficiary packages entailing cash incentives that cover only half of total educational costs. Lower unit costs are seen as a means to maximize coverage. The primary point of convergence between national and NGO programs appears to be the use of local committees to administer the programs. To a large extent, national program design characteristics are driven by a need for politically appealing initiatives of a large scale that cannot possibly be administratively resourced in the same way that NGO programs are due to their large size. This resourcing refers particularly to the highly credible but time/staff intensive selection procedures developed in NGO programs. The national programs, therefore, make the calculated risk that lower levels of efficiency (in the form of higher dropout rates) can be compensated for by larger intakes than NGO programs have historically been able to manage. Because these assumptions put the poorest members of proposed target groups at the greatest risk, they have not been met by enthusiasm by NGO partners who are weary of such measures. The effectiveness of the proposed national programs in the future should, therefore, be a matter of great interest to government, NGOs, and donors.

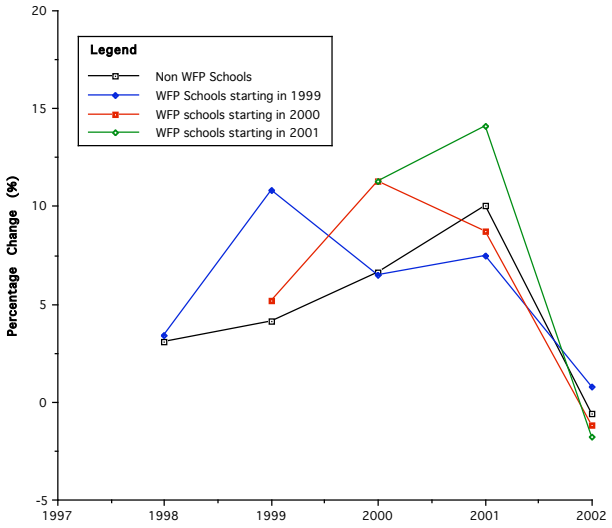
[3] Unlike primary schools, high schools in Cambodia are administered directly by Provincial Offices of Education and not by local district offices, thereby greatly weakening local accountability.

5.5.3. Stakeholder Views Regarding School Breakfast Programs

Another highly demand driven intervention introduced into the educational system to improve educational demand has been the School Breakfast Program (SBP) supported by the World Food Program in collaboration with international and nongovernmental organizations as well as government. This intervention began on a trial basis in 1999 in one province and has been steadily expanded to take in over 560 schools over the last three or four years in 6 provinces.[4] Over the years, targeting and the refinement of mapping instruments have steadily improved to focus more and more heavily on poverty-indexed factors and associated educational priority indicators. Because many children in Cambodia eat lunch but miss breakfast at home, the program has been configured to provide a morning meal of rice and fish (provided by WFP) supplemented by vegetables (provided by communities). In this way, program design addresses morning hunger issues, which have a deleterious effect on classroom attention. And because the provision of food is an indirect supplement to the meager incomes of many poor families, the program is intended to draw more and more children into the system and keep them there.

Overall, the program has been very well received by local partners and very few communities forego the option of receiving the program even though the conditions for eligibility are rigorous.[5] In this respect, communities are required to guarantee a water source, the provision of fuel and vegetables, storage facilities, and kitchens. But the enrolment figures tell the true story. As one might expect, the effect on enrolment is dramatic in the first year of program operation but then declines steeply in following years as school capacity becomes "maxed" out (Figure 5.1). Although there has been a steady increase in enrolment generally throughout the country in all schools, the enrolment increases in WFP supported schools appear to be higher. According to Table 5.16, average increases vary within a range of 6.2% to 6.4% compared with 4.6% for NonWFP supported schools.

Figure 5.1: Comparison in Enrolment Change in WFP and NonWFP Supported Schools, 1998-2002



Source: WFP, 2003

Table 5.16: Average Change in Enrolment and Dropout in WFP and NonWFP Supported Schools, (Grades 1-5) 1997-2002 (Source: WFP, 2003)

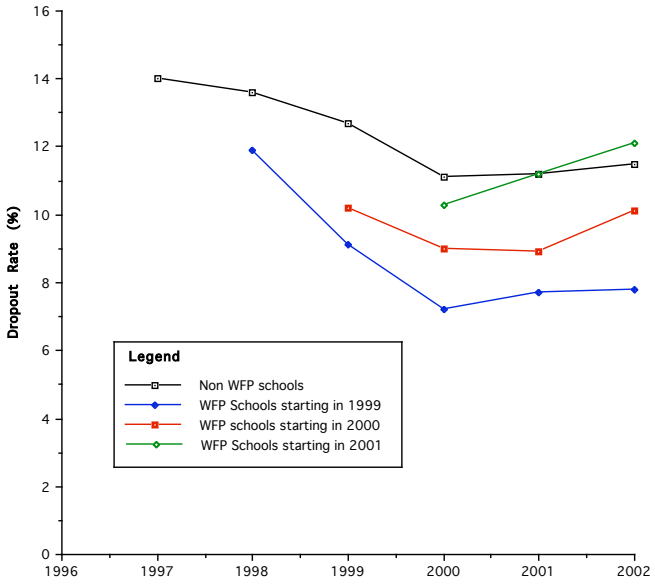
Comparison Group	Average Change in Enrolment (1998-2002)	Average Change in Dropout Rate (1997-2002)
NonWFP Schools	+4.6%	-0.5%
WFP Schools starting in 1999	+6.4%	-1.0%
WFP Schools starting in 2000	+6.3%	0.0%
WFP Schools starting in 2001	+6.2%	+0.9%

[4] Including Takeo (1999), Kampot (2000), Kampong Cham (2000; 2001; 2002), Kampong Thom (2002), Kampong Speu (2002), and Prey Veng (2002).

[5] Personal communication with Mr. Bin Thon, Unicef Program Officer, Prey Veng, 2003; Mr. Om Siang Hua, KAPE Program Officer, Kampong Cham, 2003.

Although the effect on enrolment has been dramatic, impact on dropout rates has been less conclusive according to recent analyses (WFP, 2003). Although the average decline in dropout rate over the period 1997 to 2002 was greater in schools that began program implementation in 1999 in comparison to NonWFP supported schools over the same period, the margin of difference was small and seemed to disappear in later years when the program was expanded. Indeed, dropout rates were reported to have increased in WFP supported schools during the expansion that occurred in 2001 (Figure 5.2). This outcome is of some concern because school expansions in later years were guided by better poverty-indexing than was true of school selection earlier in the program. This would, therefore, suggest that poorer areas are less amenable to effects on dropout as a result of SBP interventions than is true of schools located in more economically stable communities.

Figure 5.2: Change in Dropout Rate in WFP and NonWFP Supported Schools, 1997-2002



Source: WFP, 2003

Another possible interpretation of the trends demonstrated in Figure 5.2 relates to external factors that may affect dropout. For example, the years 2001 and 2002 were difficult years in many parts of the country due to late rains followed by flooding. This impacted severely on the wet season harvest in those years, which would explain the sudden upswing in dropout in all schools during that time period. This would argue that SBP interventions can be an effective intervention against dropout, all things being equal, but that the extent of its influence is likely limited by external factors such as economic swings in the agricultural sector.

One of the primary concerns about the SBP relates to its sustainability. Average unit costs are about $14 per child and exceed the government's entire unit cost per child per year. Thus, the likelihood that the government could take over this program from the World Food Program is very slim. Many stakeholders worry what the effect will be on schools when WFP curtails or ceases its assistance in current areas where the program has been operating for 4 years or more. These concerns are becoming more and more acute as a proposed phase out in certain schools enters the planning stage.

SECTION SUMMARY

1. Primary Educational Demand and Lower Secondary School Availability

- Although there are some indications that expansion of lower secondary school availability may increase primary level educational demand, relationships between the 2 factors are not robust.
- There are indications, however, that such measures may affect the educational demand of a significant minority of children at upper primary level.

2. The Role of Other Supply/Demand Side Factors in Educational Demand

- Student survey results suggest that official dropout rates may be under reported.
- Although significant relationships between primary educational demand and demand side factors are more numerous, the relationship with distance, a supply side factor, is more robust.
- An important difference between primary and secondary school students is that the former cite distance more frequently as the leading problem in attending school while the latter cite cost concerns.
- Curricular relevance and quality issues did not emerge as supply side factors that significantly inhibit educational demand among any group.
- Direct educational costs were cited by lower secondary school students as the problem of greatest concern in attending school.
- Among lower secondary school students who have little hope of finishing high school (low student intent), *indirect costs* and *age* emerge as among the factors with the strongest correlation with low educational demand.
- Parental attitudes towards education (as interpreted by their children) exhibited only weak relationships with measures of educational demand. The influence of this factor is thought to be projected in conjunction with other factors such as financial concerns.
- In analyses of national level data, *educational quality, complete schools, lower secondary school availability, gender parity index among teachers,* and *socioeconomic status* all correlate with measures of educational demand. PCR and overage enrolment did not show consistently significant relationships.

3. Demand Variations by Sex

- Survey data indicated that primary school girls were more motivated than boys to continue studying and were more inclined to change their minds about dropping out of school if it were easier to go to lower secondary school.
- Girls tend to cite distance as a demand-inhibiting factor more frequently than boys.
- Curricular relevance, or the lack of it, emerged as an area of greater concern for girls than for boys (though not one that directly affected their demand).
- The study also found significant differences between boys and girls regarding the lack of toilets in schools and a preference for female teachers.

4. Demand Variations by Demographic Origin

- Among urban primary and secondary school students, direct educational costs are cited as the leading problem in attending school.
- Remote and rural primary students tend to cite distance as their leading problem, shifting to cost concerns at lower secondary level.

5. Stakeholder Views on Appropriate Interventions to Boost Educational Demand

- Among secondary school students most at risk of dropping out, there is a preference for cash incentives as the most appropriate intervention; parent and teacher groups also strongly advocate cost subsidies but teachers advocate such assistance in kind.
- NGO scholarship programs exhibit high success rates but rely on resource intensive design features that are difficult replicate in nation wide scholarship programs, leading the latter to focus on quantitative targets with fewer concerns for efficiency.
- School breakfast programs have been highly effective in increasing primary school enrolment but its influence in affecting dropout has been less conclusive.

6. Discussion and Conclusions

6.1. Survey Results and the Conventional Wisdom

With some qualifications, the conventional wisdom regarding the relationship between educational demand and various supply/demand side factors has more or less been validated by the results of this study. In this respect, low socio-economic status, distance, direct and indirect costs, and low parental education levels all seem to correlate with selected measures of educational demand such as school dropout behavior and transition rate to lower secondary school.

Yet, though congruent with the broad outlines of the conventional wisdom regarding why children do not complete school, there have been areas where survey findings have not borne out common expectations. One of the main expectations of this study was that there would be a robust relationship between the magnitude of obstacles a primary school student might face in continuing on to secondary school and their motivation or hopefulness to complete primary school. That is, lower secondary school availability should encourage primary school completion. Survey results, however, did not find a robust relationship with the most important measure of lower secondary school availability, *distance.* Though the study did find generally strong relationships between broad measures of national availability and demand (such as national dropout and transition rates), it is not clear whether the demand leads to availability or vice versa. And while a significant minority of children indicated that they might change their mind about completing primary school if it were easier to go to high school, a majority still said they would not. The impression of the researcher is that the mind set of poor families does not provide hopeful grounds for strong expectations that increasing the availability of lower secondary schools will appreciably stimulate demand among the poorest of the poor, particularly in rural and remote areas. Rather, the grim economic environment that these families live in and the limited opportunity for economic advancement means that families tend to think in short term time frames with little long term planning about whether or even if education will appreciably make a difference in their lives.

The above viewpoint is not to suggest that propoor interventions designed to increase participation rates among the poor in the education system are doomed to failure. It does, however, argue that it is important for policy makers to distinguish between *necessary* and *sufficient* conditions needed to bring about change. That is, expanding lower secondary school availability is certainly a necessary condition to increase participation rates among the poor but that in the current environment, neither it nor demand driven measures will likely be sufficient in and of themselves to do so.

For those of us who are educators, there is often the wishful thought that the provision of high quality education is a powerful stimulant of educational demand. This conventional wisdom, however, was not borne out by this study's investigations. Indeed, supply side factors dealing with educational quality issues seemed to come out consistently as the lowest order issue for children at both primary and secondary school level. In this regard, most children stated that they were generally satisfied with the quality of the education that they were receiving. One possible interpretation of this response is that children felt constrained to give a socially desirable response, especially given that they filled out their questionnaires on school premises, albeit anonymously and with their teachers at a safe distance in the next building. Another possibility is that children who have never had the experience of high quality education may not be equipped to give a critical answer in this regard. These results are disappointing because, if accurate, they partly undercut the rationale for the investment in quality aspects of education as a means to boost educational demand. These findings notwithstanding, many students did cite strong concerns with the lack of curricular relevance in their education, as distinguished from general school quality, particularly at secondary school level. Though the link with educational demand was not an overriding one, curricular relevance is a point of leverage that could

potentially affect educational demand as incremental improvements create an expectation (and need) for more of the same.

An area where survey results suggest the need for considerable additional investigation relates to the role of overage enrolment in educational demand. The available evidence in this regard is highly contradictory. For example, while overage enrolment as a proportion of total enrolment has been increasing by a large margin in recent years, especially at secondary school level, government statistics inexplicably indicate that dropout rates are *dropping.* This is occurring even in the absence of major demand side interventions to lighten the burden of educational costs. In addition, analyses of national data in this study found no correlation between dropout rate and overage enrolment at any level. On the other hand, responding patterns among students in the small sample employed for this investigation did find relationships between age and educational demand that were in accordance with what the conventional wisdom would dictate. But this does not seem to accord with national data trends. It is, therefore, certainly an area worthy of additional study.

6.2. Supply and Demand Side Factors in Perspective

Based on the results of this study and others as well as national data trends, it is clear that both demand and supply side factors play an *equally* important role in influencing educational demand. While demand side factors of a financial nature seem to be the dominant concern among students at secondary school, distance concerns seem to predominate among primary school children in rural and remote, though not urban, areas. Indirect costs seem to be a pervasive problem among all demographic categories of children but of low-grade intensity. It is a problem that seems to lurk in the background so that after solving the school availability problem and then the direct cost problem, children still seem to drop out because parents need them to work in the household or in the market place. It is hard, therefore, to make a determination about the ascendancy of any given factor. They all seem to be interconnected in a web of relationships such that addressing one is not sufficient to counterbalance the others.

Parental attitudes towards education are often thought of as playing a very crucial role in educational demand. Local educators frequently use the "lack of parental support of education" thesis as a common whipping boy to explain student dropout behavior. In the actual event, the influence of parental attitudes appears to be highly overrated and conditional on a number of related factors, particularly financial ones. Although this investigation did find a relationship between parental attitudes towards education (as interpreted by their children) and educational demand measures (at primary school level only), these were marginally significant and of low magnitude. In absolute terms, children generally reported their parents to be very supportive of their education by magnitudes of 80-90% or more, even in remote areas. Based on these findings and observations by NGO operated scholarship programs, parental attitudes appear to be latent factors with respect to their influence on educational demand; the extent to which they play an active role in educational demand decisions depends on the financial situation of a family and the sex of the child. That is, parents are often well disposed to continue the education of their children but financially unable to do so. In such cases, the son comes first; and if financial resources are still not sufficient, no one goes.

6.3. Appropriate Interventions: What Kinds and for Whom?

With its propoor focus, educational reform in Cambodia has adopted many demand driven features. But as reform measures are increasingly applied to the secondary education sector, it is apparent that supply side interventions should not be displaced by demand driven ones. What this study suggests is that demand side concerns, particularly direct and indirect educational costs, predominate among those who eventually make it to lower secondary school *but* that supply side factors appear to continue to keep a large number out completely. For example, among the Grade 5 and 6 children interviewed in this study, more than half indicated that the most serious obstacle they faced in going to primary school, much less secondary school, was distance. These results suggest a decidedly supply side problem in educational demand. *In view of these considerations, it will be important for policy makers to prevent the pendulum of reform at secondary school level from swinging too far towards demand side interventions,* particularly in an environment where several donors are rushing in to fund massive secondary school scholarship programs throughout the entire country.

The design of interventions to improve participation rates in basic education should also be realistic about whom they are most likely to help and under what conditions. For example, this investigation suggests that those children most likely to be assisted by interventions that extend lower secondary school availability (under current conditions) will be urban students and girls. That is, according to survey results, these were the characteristics of children most likely to change their minds about continuing their education if it were easier to go to secondary school. Remote children and boys as a whole, on the other hand, however, seemed more resistant to such measures. These observations, however, would only apply to *status quo* conditions where girls who make it to upper primary school level have been largely screened to include only the most motivated. These assessments imply a need for diverse responses to diverse problems rather than unitary programs that fail to recognize the differences between groups and regions. Such interventions might include the following:

- For urban children: Demand driven programs at both primary and secondary school level in order to address student concerns for extremely high direct educational costs stemming from extremely high informal charges. Such interventions may need to provide cost subsidies that are higher than those provided in other areas.
- For rural and remote children: Targeted scholarship programs in poor communes that meet high direct educational costs at secondary school level coupled with institutional reforms that increase the availability of Grade 1 to 6 schools to address distance concerns. At the same time, increasing availability of lower secondary schools in such areas through whatever means should recognize human resource constraints in staffing.
- For girls: Supply/demand side interventions at secondary school level should be coordinated with parallel interventions at primary that boost participation rates among girls. Such measures might include expanding incomplete schools, improving gender parity indices among primary school teachers in rural and remote areas, provision of toilets cum school budgets to maintain them,[6] and appropriate revisions in curriculum to increase relevance.

Implicit in the above strategy are approaches that are coordinated at both primary and secondary school level. Philosophically, this approach is in harmony with integrated design features of demand enhancement programs currently proposed by government.

[6] Although schools already receive operating budgets through the current education reform program, school directors are not often sure whether they can spend received funds on such expenditures as toilet maintenance.

6.4. Final Thoughts

Government's current reform program to enhance participation rates throughout the basic education cycle has great merit, particularly with respect to its propoor provisions. It espouses an integrated approach with parallel interventions at both primary and secondary school level. The reform program also includes elements of both supply and demand side measures to give balance to the overall initiative. At secondary school level, proposed interventions include traditional infrastructure construction, measures to increase staff utilization, rapid response construction grants targeted at poor communes as well as scholarships for girls and the poor. In addition, the development of demand driven programs have been characterized by a sincere effort to include stakeholder consultation at both design and implementation stages.

The current investigation has helped to validate several of these design features, especially the need for an integrated approach at primary and secondary school level. The study has nevertheless also highlighted some of the inherent risks of the reform program, particularly the growing ascendancy of nationwide demand side interventions that rely extensively on unitary beneficiary packages. In addition, study findings advise the need to temper high expectations that program interventions will have dramatic impact on rural and remote student populations due largely to endemic economic conditions that heighten direct and indirect cost inhibitors of educational demand. Finally, the study cautions about the dangers of large scale interventions that are planned and implemented in short timeframes in order to meet access targets that may not be realistic. Approaching implementation in this way may lead to such debilitating problems as poor targeting, human resource and capacity building constraints, and fractured stakeholder consensus.

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ANNEXES 1-4

Annex 1: Interview protocols
Annex 2: Survey Instruments
Annex 3: Summary of Student Responding on Questionnaires
Annex 4: Team Members