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# **NEW GENERATION SCHOOLS Mid-Year Progress Report (Jan-June 2020)**

## **YEAR 5 IMPLEMENTATION**



**JULY 2020  
PHNOM PENH**

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## 1. EXECUTIVE SUMMARY

**GENERAL OVERVIEW:** The 2019-20 school year began with great momentum. Coming off of an excellent *Bac II Examination* result in 2019 and record demand for enrollment in all schools at the start of the new school year, the program continued its efforts to ensure that all grades and students are included in the NGS program. Secondary school enrollment now stands at 3,839 while primary enrollment at NGS sites has reached 1,883 or a total of 5,722 students. Currently, NGS sites at Preah Sisovath HS and Hun Sen Kampong HS have both reached Grade 12 in terms of their grade coverage and are no longer receiving infrastructure investment, unlike the other schools. Unfortunately, the Covid19 crisis caused a near total cessation of activity, as all schools in the Kingdom were closed in March 2020. Schools were still closed during the current reporting period (January to June 2020), but it is hoped that New Generation Schools will be allowed to re-open in September 2020 pending a review of their hygiene standards and plans for social distancing in classrooms.

### RECENT ACTIVITIES

**Funding Situation:** As the month of June arrived, funds from Ministry of Economy & Finance (MoEF) also arrived, allowing KAPE to repay credits provided by the Franks Family Foundation to keep all operations running smoothly. In this respect, FFF provided over \$450,000 in operating credits to KAPE to ensure that teacher incentives and salaries were paid on time and capacity-building activities could also be organized in a timely manner. With the arrival of funds from MoEYS-MoEF, funds are now being returned to FFF and major investments in school infrastructure renewal can now begin in time for the new school year.

**Online Education Programming:** Nevertheless, the NGS program has not been idle during the closure period of April to June. The NGS Central Office has supported schools to move educational activities to an online platform for all students. In this respect, hundreds of lesson videos have been produced by teachers in all schools and disseminated through special *YouTube* channels to all students. Schools have been monitoring rates of access to the videos by students electronically and have made detailed reports about the academic progress in all schools.

**Question Bank Establishment:** At the same time, program planners have also moved forward vigorously with efforts to set up an electronic Question Bank that can be used in all subjects and across all grades. The Question Bank includes facilities for the analysis of each item to ensure that it is functioning properly and has proper levels of difficulty and discrimination for the purpose for which it is to be used.

**School Management System Establishment:** While setting up the electronic Question Bank, NGS programmers have also started the expansion of a pilot started last year to standardize automated school management software across all schools. These efforts build on an agreement with a leading tech start-up company called *Sala*, which was selected to develop the software needed for this purpose. All managers have now been trained in using this software and it will become fully operational as soon as schools re-open for the new school year.

**New NGS Website:** The NGS Program has also moved quickly to set up a website platform for New Generation Schools that will complement the Facebook Page. Given the increasing profile of NGS reforms both domestically and internationally, it makes sense to

develop a free-standing website platform. Stakeholders will be able to apply for entry on this site, access technical documents, learn about the latest NGS news, and other matters that are currently done manually. The platform will be operational before the end of the current fiscal year.

**New Publications:** In parallel with these efforts, NGS programmers have also used the period of school closure to move forward with the completion of several new publications in order to better document the process of implementing NGS reforms. New publications cover such topics as Library Development, Student Assessment, and Architectural Designs for 21<sup>st</sup> Century Schools. MoEYS will soon be systematizing all NGS publications so that they can all be easily accessed online.

**International Recognition & Good Press for Cambodian Education:** Finally, the New Generation School Initiative is attracting international attention. In this regard, the program has been showing up in multiple international publications published by Springer Press (of Singapore), Harvard University, the Adenauer Foundation, and the World Bank. The program was also recently presented at the *Comparative International Education Society Conference (CIES)* in San Francisco in 2019. Other nations in the region are now showing interest in the model and replication has already started in Lao PDR and Myanmar, leading to an interest to send international students to attend the Master's Degree Program (which is taught in English) at the NGPRC at the National Institute of Education. Thus, the New Generation School initiative is not only benefiting Cambodia's education system but is also bringing international praise and recognition to the Kingdom.

**KEY ACHIEVEMENTS:** The implementation of New Generation School Reforms has been a bright spot in MoEYS' efforts to improve educational quality. Between 2015 and 2019, MoEYS had invested about \$4.8 million in the NGS system for school modernization as well as policy and curriculum development. These schools have not disappointed and have reported very encouraging outcomes on a number of important metrics including very high pass rates on the national Bac II Examination, high transition rates to university, very low dropout rates, an accelerating rate of school accreditation, and high professional standards among teachers. Many of these indicators move beyond test scores and demonstrate the ability of students who study in these schools to compete successfully in international academic competitions and evince high rates of transition to university. In addition, learning appears to have broken out of an exam-driven mode leading to a profusion of project work completed by students. For example, in 2019, students enrolled in secondary New Generation Schools completed 490 group projects on topics of their own choosing. This was a significant breakthrough in the culture of learning, which is still very much exam-driven.

## **KEY CHALLENGES**

- 1. The Extended Closure of Schools:** The closure of schools due to the Covid19 crisis has been quite disruptive to NGS programming this year. In addition to regular classes, the program has had to cease all programming relating to such major events as Parents' Night Shows and associated project work, preparation for the Bac II Examination, participation in international competitions, life skills activities, exposure visits, student club activities, accreditation visits, and other activities. All of this will have the effect of greatly setting back students' learning, particularly for Grade 12 students who are most concerned about their transition

into a tertiary institution

2. **Increasing Investment in Online Education:** As noted above, most New Generation Schools have sought to shift their instruction to online channels during the pandemic. However, the lack of internet and the poor penetration of mobile devices in more rural areas such as Peam Chikong HS in Kampong Cham and Kok Pring HS in Svay Rieng pose more of a problem. These obstacles have greatly impacted online learning in these schools already.
3. **The Status of Accredited but Unsupported Schools:** There continue to be several schools in the NGS system that have been accredited but which are still not receiving any direct support from MoEYS. This includes Kok Pring HS in Svay Rieng Province and the Demonstration School (a primary school) in Kampong Cham Province. Both schools achieved their accreditation in 2019, which was a major milestone in their development. Nevertheless, according to MoEYS' New Generation School Policy, any accredited NGS institution is entitled to direct support from the government, at least for those students whose parents are unable to pay any voluntary support fees through the *Social Equity Fund* concept. However, within the context of frozen levels of funding for NGS programming, it has not been possible to adhere to this provision in the policy.
4. **Teacher Resistance to Joining NGS at Prek Leap, Prek Anchanh, & Peam Chikong HS:** As Prek Leap and Prek Anchanh High Schools prepare to expand to Grade 11 in the 2020-21 academic year, they will be encountering a hard-core group of teachers at the higher grade levels who are quite wedded to a 'rien kua' mentality as the *raison d'être* of their teaching. Outreach to these teachers to voluntarily join the program has so far not been very successful. In this respect, only 4% of these teachers at Prek Leap have volunteered to join the program while 13% of teachers at Prek Anchanh have volunteered to do so. A similar situation prevails at Peam Chikong HS as it expands to Grade 10. The primary reason for their unwillingness to join the growing New Generation School program is that NGS Policy Guidelines require them to give up their private 'rien kua' classes, which they refuse to do, even though they would receive an incentive to compensate them.
5. **Misrepresentation of NGS Unit Costs:** Recurrent unit costs are declining at accredited schools within the New Generation School System, particularly as parents start to pick more and more of the costs. Nevertheless, some development partners have recently issued publications that maintain the fiction that New Generation Schools entail continuously high unit costs throughout their implementation, when in fact these are declining in most schools where capital expenditures have been completed. The fiction that New Generation Schools are too expensive to replicate is one of the primary arguments against additional investment to expand the model to other locations. It is, therefore, important for NGS advocates to push back against this misinformation and better inform development partners and members of the general public about the true nature of the unit costs entailed by this educational reform.

## 2. BACKGROUND

### 2.1 Historical Evolution of NGS Reforms

New Generation School Reforms began in 2015 and are now nearing five full years of implementation. Throughout this period, MoEYS has worked closely with development partners such as KAPE, the Franks Family Foundation, and Child Fund to implement these reforms. Establishing such institutions builds on the experience of a pilot program (known as the Beacon School Initiative) that KAPE first implemented in collaboration with the Oaktree Foundation and which later came to the Ministry's attention in 2014. These charter schools, now known as *New Generation Schools*, are intended to provide an exceptionally high standard of education for Cambodian youth, especially in the STEM subjects. New Generation Schools differ from other public schools because they are allowed to work outside of the regular policy framework of the education system. In this way, they have provided important insights for both the Ministry and development partners to deal with historically intractable problems relating to educational quality. Some important lessons in this regard include the efficacy of Public Private Partnerships (PPP) to implement reforms, the feasibility of charter school concepts in Cambodia, and a road map for linking school performance to investment.

Table 2.1: Investment in New Generation Schools at All Levels, 2015-20

Year	MoEYS	Franks Family Foundation	Child Fund Australia	Oaktree Foundation	Total	Schools & Institutions Receiving Investment
<b>Secondary Schools</b>						
2015	\$374,000	--	--	\$124,000	<b>\$498,000</b>	<b>2</b>
2016	\$355,000	\$141,000	\$150,000	\$74,000	<b>\$720,000</b>	<b>3</b>
2017	\$1,270,000	\$100,000	\$150,000	\$0	<b>\$1,520,000</b>	<b>5*</b>
2018	\$1,417,000	\$59,000	\$100,000	\$0	<b>\$1,576,000</b>	<b>6</b>
2019	\$1,417,000	\$0	\$77,000	\$0	<b>\$1,494,00</b>	<b>6</b>
2020	\$1,417,000	\$0	\$77,000	\$0	<b>\$1,494,000</b>	<b>6</b>
<b>Total</b>	<b>\$6,250,000</b>	<b>\$300,000</b>	<b>\$554,000</b>	<b>\$198,000</b>	<b>\$7,302,000</b>	<b>6</b>
<b>Primary Schools</b>						
2017	\$40,000	--	--	--	<b>\$40,000</b>	2
2018	\$296,000	--	--	--	<b>\$296,000</b>	2
2019	\$250,000	--	--	--	<b>\$250,000</b>	2
2020	\$250,000	--	--	--	<b>\$250,000</b>	2
<b>Total</b>	<b>\$836,000</b>	--	--	--	<b>\$836,000</b>	<b>4**</b>
<b>New Generation Pedagogical Research Center-NIE (Higher Education)</b>						
2019	\$163,000	\$15,000	\$30,000	--	\$208,000	1
2020	\$163,000	\$17,000	\$0	--	\$180,000	1
<b>Total</b>	<b>\$326,000</b>	<b>\$32,000</b>	<b>\$30,000</b>	--	<b>\$388,000</b>	<b>1</b>
<b>GRAND TOTAL</b>	<b>\$7,412,000</b>	<b>\$332,000</b>	<b>\$584,000</b>	<b>\$198,000</b>	<b>\$8,526,000</b>	<b>11</b>

\*Includes one school supported by Child Fund; \*\*Includes two self-supporting primary schools

Educational reforms relating to charter school establishment started with secondary schools but in 2017 were extended to the primary school sector, as well. In 2019, the MoEYS also made a tactical decision to establish a Training and Research Center on the campus of the *National Institute of Education* that will intensively train teacher mentors working in New Generation School sites. The establishment of this Center, known as the *New Generation Pedagogical Research Center*, will greatly facilitate the expansion of New Generation School reforms by enhancing the availability of human resources. The first cohort of mentors will graduate in August 2020 and will enable the NGS system to establish a school-based mentoring system for the first time in Cambodia's history in which the mentors have been intensively trained in a Master's Degree Program and focus on mentoring as their primary duty (see Section 3.7).

By the end of 2020, it is anticipated that MoEYS and its partners will have invested over \$US 8.5 million in New Generation School institutions since 2015 using KAPE as the primary implementer (see Table 2.1). The vast majority of this investment has gone to the secondary education sub-sector (86%) followed by the primary sector (10%) and most recently the higher education sector (4%). Total investment includes about \$1,114,000 (or 13%) that has so far been invested by private foundations through KAPE financial channels. Thus, \$7.4 million or 87% of all investment has come from government coffers. New Generation Schools now comprise a major part of the National Educational Reform Program of the MoEYS (see Reform #14) and provide a useful model for future investment<sup>1</sup>.

## 2.2 General Overview of Operations during the Reporting Period

The 2019-20 school year began with great momentum. Coming off of an excellent *Bac II Examination* result and record demand for enrollment in all schools, the program continued its expansion in four schools at secondary level<sup>2</sup> and one school at primary level.<sup>3</sup> NGS sites at Preah Sisovath HS and Hun Sen Kampong HS have both reached Grade 12 and are no longer receiving infrastructure investment, unlike the other schools. Unfortunately, the Covid19 crisis caused a near total cessation of activity as all schools in the Kingdom were closed on 17 March 2020. At the time of the writing of this report, schools are still closed but it is hoped that New Generation Schools will be allowed to re-open in September 2020 pending a review of their hygiene standards and plans for social distancing in classrooms.

Nevertheless, the NGS program has not been idle during the closure period of April to June. The NGS Central Office has supported schools to move educational activities online for all students. In this respect, hundreds of lesson videos have been produced by teachers in all schools and disseminated through special *YouTube* channels to all students. Schools have been monitoring rates of access to the videos by students electronically and have made detailed reports about the academic progress in all schools (see Section 3.2). At the same time, program planners have also moved forward vigorously

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<sup>1</sup> See World Bank (2020). *Cambodia in the Time of Covid19: Special Focus – Teacher Accountability and Student Learning Outcomes*, Phnom Penh: Author.

<sup>2</sup> Prek Leap HS (Phnom Penh), Prek Anchanh HS (Kandal), Peam Chikong HS (Kampong Cham), and Kok Pring HS (the latter of which is supported by Child Fund in Svay Rieng Province).

<sup>3</sup> Akhea Mahasei PS in Kampong Speu.



with efforts to set up an electronic Question Bank that can be used in all subjects and across all grades. The Question Bank includes facilities for the analysis of each item to ensure that it is functioning properly and has proper levels of difficulty and discrimination for the purpose for which it is to be used (e.g., formative purposes, summative purposes, etc.). These efforts should greatly increase the validity of tests and strengthen the information base upon which all education decision-making is made. Teachers in all NGS sites have, therefore, not been idle but rather have been highly engaged in both online education and Question Bank development. While setting up the electronic Question Bank, NGS programmers have also started the expansion of a pilot started last year to standardize automated school management software across all schools. These efforts build on an agreement with a leading tech start-up company called *Sala*, which was selected to develop the software needed for this purpose. All managers have now been trained in using this software and it will become fully operational as soon as schools reopen for the new school year. In addition, the program has moved quickly to set up a website platform for New Generation Schools that will complement the Facebook Page. Given the increasing profile of NGS reforms both domestically and internationally, it makes sense to develop a free-standing website platform. The platform will be operational before the end of the current fiscal year.

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*Question Bank training session for Technical Grade Leaders at all schools at Preah Sisovath HS Auditorium. →*



### 3. KEY ACCOMPLISHMENTS AND ACTIVITIES DURING THE PERIOD

#### 3.1 Update on Programming Scope

Before the closure of schools in March 2020, all schools reported their enrolments for the current academic year, which reflect steady increases as grade coverage expands at Prek Leap HS, Prek Anchanh HS, Peam Chikong HS, and Kok Pring HS. Preah Sisovath HS has also decided to increase its Pupil Class Ratio from 32 to 1 to 36 to 1, which is the maximum allowed under NGS Policy. Demand for admission at Preah Sisovath HS has been exploding in recent years while the school has only limited seats due to the need to keep many classrooms available for teachers in the normal school to teach their private classes. Enrollment at secondary schools in the NGS system increased to 3,839 students in the current academic year from 3,128 students last year or an increase of 23%. In contrast, primary school enrollment has remained stable at 1,883 students (in comparison to 1,830 last year), as schools have followed an advisory to start reducing their PCR levels in order to meet new NGS Accreditation requirements. These requirements were introduced last year and require at least 80% or more of classes to have fewer than 36 students per class. Overall, NGS enrollment at both primary and secondary level has increased to 5,722 compared with 4,958 last year or an increase of 15% (see Table 3.1).

*Table 3.1: Enrollment, Investment Sources, & Background across all New Generation School Sites (2019-20)*

Province	School Name	Enrollment (2019-20)	Number of Classes	Investment Source	Date of Establishment	NGS Development Model
<b>Secondary School Level</b>						
Phnom Penh	Preah Sisovath HS	1,004	28	MoEYS-FFF	Oct 2015	School in a School
	Prek Leap HS	741	24	MoEYS-FFF	Oct 2017	Whole School
Kampong Cham	Hun Sen Kampong Cham HS	381	12	MoEYS-FFF	Oct 2015	New School/ Dying School
	Peam Chikorn HS	541	18	MoEYS-FFF	Oct 2018	Whole School
Kandal	Prek Anchanh	803	24	MoEYS-FFF	Oct 2017	Whole School
Svay Rieng	Kok Pring HS	369	11	Child Fund	June 2015	Whole School
<b>Total</b>	<b>6 schools</b>	<b>3,839</b>	<b>117</b>	<b>3 Sources</b>	--	<b>3 Models</b>
<b>Unit Costs</b>	--	<b>\$364/Student</b>	<b>\$12,786/class</b>			
<b>Primary School Level</b>						
Kampong Cham	Demonstration School	473	13	Self-supporting	Oct 2015	New School/ Dying School
	Angkor Ban PS	307	10	MoEYS	Oct 2017	Whole School
Kg Speu	Akhea Mahasei PS	756	21	MoEYS	Oct 2017	Whole School
Svay Rieng	Svay Prahut PS	347	12	Child Fund	June 2015	Whole School
<b>Total</b>	<b>4 Schools</b>	<b>1,883</b>	<b>56</b>	<b>3 Sources</b>	--	<b>2 Models</b>
<b>Unit Costs</b>	--	<b>\$133/Student</b>	<b>\$4,464/class</b>	--	--	--
<b>GRAND TOTAL</b>	<b>10 Schools</b>	<b>5,722</b>	<b>173</b>	<b>4 Sources</b>	--	<b>3 Models</b>
<b>Unit Costs</b>	--	<b>\$292/student</b>	<b>\$10,092/class</b>	--	--	--

As noted above, grade coverage at several schools continued to increase during the year. The emplacement of new infrastructure by the Construction Department at Peam Chikong HS, Prek Anchanh HS, Angkor Ban PS, and Akhea Mahasei PS has made this expansion possible in many cases, even though the architectural design of these buildings

tends to follow a traditional style, requiring additional investment to modernize and adjust facilities to 21<sup>st</sup> Century learning needs. It is expected that all new buildings will be completed by the end of 2020 and hopefully in time for the 2020-21 academic year. Nevertheless, this expansion in grade coverage continues to place increasing pressure on the NGS budget to fund teacher incentives as the number of teachers joining the program continues to increase while at the same time funding levels for NGS operations have remained frozen at 2018 levels.

The budgetary pressure described above has heightened the need to ready schools for their accreditation assessments, which will empower them to negotiate with local communities for budgetary support from parents. By the end of 2020, it is expected that Prek Leap HS and Prek Anchanh HS will join the four schools that were already accredited in 2019 bringing the total number of accredited schools to six (see Section 3.6). At current rates of grade expansion, it is expected that all schools will be able to cover all grades (i.e., Grades 1 to 6 at primary level and Grades 7 to 12 at secondary level) by the end of 2022 (see Table 3.2).

Table 3.2: Actual and Projected Grade Coverage in New Generation Schools (2018-22)

Province	School Name	Grade Coverage				
		2018-19 (Actual)	2019-20 (Actual)	2020-21 (Projected)	2021-22 (Projected)	2022-23 (Projected)
<b>Secondary School Level</b>						
Phnom Penh	1. Sisovath HS	Grades 7-12	Grades 7-12	Grades 7-12	Grades 7-12	Grades 7-12
	2. Prek Leap HS	Grades 7-9	Grades 7-10	Grades 7-11	Grades 7-12	Grades 7-12
Kampong Cham	3. Hun Sen Kampong Cham HS	Grades 7-12	Grades 7-12	Grades 7-12	Grades 7-12	Grades 7-12
	4. Peam Chikong HS	Grades 7-8	Grades 7-9	Grades 7-10	Grades 7-11	Grades 7-12
Kandal	5. Prek Anchanh	Grades 7-9	Grades 7-10	Grades 7-11	Grades 7-12	Grades 7-12
Svay Rieng	6. Kok Pring HS*	Grades 7-9	Grades 7-10	Grades 7-11	Grades 7-12	Grades 7-12
<b>Primary School Level</b>						
Kampong Cham	7. Demonstration School**	Grades 1-6	Grades 1-6	Grades 1-6	Grades 1-6	Grades 1-6
	8. Angkor Ban PS	Grades 1-6	Grades 1-6	Grades 1-6	Grades 1-6	Grades 1-6
Kg Speu	9. Akhea Mahasei PS	Grades 1-2	Grades 1-3	Grades 1-4	Grades 1-5	Grades 1-6
Svay Rieng	10. Svay Prahut PS*	Grades 1-6	Grades 1-6	Grades 1-6	Grades 1-6	Grades 1-6

\*Supported by Child Fund; \*\* Self-supporting.

### 3.2 Efforts to Promote Online Learning

Following the closure of all schools, the NGS Central Office wasted no time in organizing schools to move the learning process to an online channel, where ever possible. Teachers were also informed that in order to justify the payment of their incentives, participating in online learning activities was mandatory. In general, rates of teacher participation have been extremely high, averaging between 96% to 100% across most schools (see Table 3.3). In order to monitor the activities of teachers, a special tracking form (see **Annex 1**) was created by the NGS Office, which is completed on a weekly basis by all teachers. School managers check these forms before submitting them to the NGS Main Office for tabulation.

Altogether, seven of the 10 schools in the NGS system had active participation in the online learning activities organized by the program. Three schools (i.e., Kok Pring HS, Svay Prahut PS, and Angkor Ban PS) could not participate due to the intermittent nature of internet service in their catchment area making it difficult for local families to go online. These schools maintained educational services for their students through the regular MoEYS system of paper-based worksheets and tests. Nevertheless, teachers in

the rest of the NGS system produced 4,180 lesson videos at secondary school level and 276 videos at primary level during the period April to June 2020 (see Table 3.3) Video production at Akhea Mahsei PS was also depressed because of the poor internet service there and the school decided to abandon its online learning programming after about six weeks of video production and move to a worksheet mode. On average each secondary school teacher produced 20 lesson videos while primary schools produced 8 per teacher. Preah Sisovath HS was especially productive in this regard as the teachers there also assisted the MoEYS to develop general archival videos for the entire school system in collaboration with the *Center for Digital & Distance Education* that will also be establishing its offices at the school. The decision to place the CDDE at Sisovath HS will further promote the reputation of the school as a center for innovative education.

**Table 3.3: Progress to Promote Online Learning in New Generation Schools by Subject and School (2020)**

School	Number of Videos													Number of Teachers	Participating Teachers	Participating Teachers as a %	Videos per Teacher		
	Subject:	K	M	P	C	B	En	H	G	Mo	ES	IT	Other					Total	
<b>Secondary School Level</b>																			
Sisovath HS*	148	298	232	154	134	37	84	20	19	14	27	22	<b>1,189</b>	61	61	100%	32		
Sisovath HS**	136	193	96	119	117	0	76	0	0	0	0	0	<b>737</b>						
Prek Leap HS	68	120	71	73	65	68	64	71	68	32	84	0	<b>784</b>	50	48	96%	16		
H.S. Kampong Cham HS	86	86	40	33	44	80	35	28	47	29	20	23	<b>551</b>	22	22	100%	25		
Peam Chikong HS	41	29	34	30	30	28	42	32	31	12	40	0	<b>349</b>	28	27	96%	13		
Prek Anchanh HS	52	60	54	57	55	47	49	49	63	24	60	0	<b>570</b>	49	46	94%	12		
Kok Pring HS***	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	0	0	0	0		
<b>Total</b>	<b>531</b>	<b>786</b>	<b>527</b>	<b>466</b>	<b>445</b>	<b>260</b>	<b>350</b>	<b>200</b>	<b>228</b>	<b>111</b>	<b>231</b>	<b>4,135</b>	<b>4,180</b>	<b>210</b>	<b>204</b>	<b>97%</b>	<b>20</b>		
<b>Primary School Level</b>	<b>G1</b>	<b>G2</b>	<b>G3</b>	<b>G4</b>	<b>G5</b>	<b>G6</b>													
Demonstration School PS	26	46	60	11	40	10							<b>193</b>	13	13	100%	15		
Akhea Mahasei PS <sup>4</sup>	60	10	13	-	-	-							<b>83</b>	21	21	100%	4		
Angkor Ban PS***	-	-	-	-	-	-							-	-	-	-	-		
Svay Prahut PS***	-	-	-	-	-	-							-	-	-	-	-		
<b>Total</b>	<b>86</b>	<b>56</b>	<b>73</b>	<b>11</b>	<b>40</b>	<b>10</b>							<b>276</b>	<b>34</b>	<b>34</b>	<b>100%</b>	<b>8</b>		

\*Sisovath HS\*: Videos for teacher; \*\*Sisovath HS: Videos developed for MoEYS; \*\*\*Follows regular MoEYS Worksheet Program as internet service not available or reliable

In order to more easily disseminate the videos produced by teachers to students enrolled in the NGS System, schools formed their students into classroom-based social media groups on *Telegram*. Schools also posted educational videos on YouTube Channels established in each school. Teachers posted their videos and associated tests on these media groups to share with students the week's lessons while also tracking students' learning through the use of regular tests. Schools reported that about 63% of secondary school students were actively participating in these lessons while at primary level, 81% were participating (see Table 3.4). These assessments of student participation in online

<sup>4</sup> Unlike the Demonstration School, Akhea Mahasei PS only has coverage up to Grade 3. Grades 4, 5, and 6 are scheduled to join the NGS program over the next 2 to 3 years.

learning were based on the number of tests students had completed and submitted back to their teachers using Google Form.<sup>5</sup> NGS teachers appear to have developed significant capacity to administer distance education services to their students, though many students appear to struggle with learning this way either due to limited internet access or insufficient access to a mobile learning device. As one might expect, student participation was highest in the upper grades (e.g., Grade 11 and 12), which evinced participation rates of 72% to 74% than the lower grades (e.g., Grades 7 and 8), which only evinced participation rates of 49% to 56%.



**Producing Educational Resources for Distance Education:** A training workshop at Hun Sen Kampong Cham HS helps teachers to develop educational videos.

**Table 3.4: Student Engagement in Online Education by Grade (2020)**

Grade	Total Students	Total Tests Completed (May-June)	Tests Completed per Student	Total Tests Assigned	% of Tests Completed by All Students
<b>Secondary School Level*</b>					
7	917	26,005	28	64,740	49%
8	725	23,816	33	47,485	56%
9	768	27,076	35	49,118	59%
10	651	26,367	41	40,276	68%
11	285	6,369	22	8,570	74%
12	158	3,616	23	5,396	72%
<b>Total</b>	<b>3,504</b>	<b>113,249</b>	<b>30</b>	<b>215,585</b>	<b>63%</b>
<b>Primary School Level**</b>					
1	247	500	2	634	79%
2	359	705	2	866	81%
3	345	704	2	846	83%
4	72	235	3	288	82%
5	103	317	3	412	77%
6	76	264	3	304	87%
<b>Total</b>	<b>1,202</b>	<b>2,725</b>	<b>2.5</b>	<b>3,350</b>	<b>81%</b>

\*Excludes Kok Pring HS; \*\*Excludes Svay Prahut and Angkor Ban PS

<sup>5</sup> Google Forms is a tool that allows collecting information from users via a personalized survey or quiz. The information is then collected and automatically connected to a spreadsheet. The spreadsheet is populated with the survey and quiz responses.

### 3.3 Electronic Question Bank Development

The New Generation School System has struggled with the issue of valid test administration where teachers' assessments generate believable data on student understanding and performance. NGS has resisted the idea of instituting standardized tests (developed at central level) as other projects have done for fear that this will introduce negative 'wash-back' effects on how and what teachers teach. Teachers in Cambodia tend to 'teach to the test' in the context of standardized testing, which frequently undermines efforts to promote instruction of higher order thinking, assign student projects, etc. The strategy chosen by the program to keep teachers in the driver's seat when it comes to student evaluation while maintaining high standards of assessment validity encompasses this year's efforts to create systematic item analysis procedures in each school linked to an interschool Question Bank. The Question Bank will be electronic in format and will enable teachers to assemble their own tests using questions that have been rigorously analyzed in terms of their difficulty levels and ability to discriminate between high and low performing students.



↑ An example of the Template for the Test Analysis System established for each school. The template reads, (1) Tables of Specification; (2) Sample Tests; (3) Upper Group Scores; (4) Lower Group Scores; (5) Test Analysis Results; and (6) Full Question Displays. Data from the test analysis activities from each school will feed into a Question Bank accessible by all schools in the system to ensure the development of the most valid tests possible.

All NGS teachers have previously been trained in basic concepts of assessment such as the meaning of 'validity', how to use Tables of Specification to ensure Content and Construct Validity in tests, and Techniques in Question Development in various formats (both objective and subjective). Teachers understand the importance of developing Educational Objectives as the starting point for assessment, how these objectives facilitate the development of Tables of Specification, and how questions can be designed to match both the content and skills taught. An important feature of the process of test development concerns using different levels of Bloom's Taxonomy to ensure that Educational

Objectives and the questions used to assess them cover a wide range of thinking skills from Memory to Evaluation and Creativity. Using the framework provided by Bloom's Taxonomy, teachers have been writing test questions in a way to ensure that they can be classified by thinking skill so that tests are versatile in assessing both lower and higher order thinking skills.

Capacity-building activities to set up the Question Bank were completed in two steps. The first step focused on how to conduct item analysis using a new template created in Excel and the meaning of interpretive indices such as Difficulty and Discrimination Level. The second step focused on following up with teachers across all schools about inputting actual data from earlier administered tests. Capacity-building activities have now been completed and all schools now have a significant number of questions with associated item analysis data that can be linked to the Interschool Question Bank. It is expected that the Question Bank will become fully operational during the next academic year with access provided either directly to schools or through the NGS Website that is currently also in development (see Section 3.5).

### 3.4 Update on Electronic School Management Programming

In 2019, KAPE contracted a tech company called SALA to develop an electronic school management platform to expedite and standardize management procedures at all secondary schools within the New Generation School System. The SALA School management system is a cloud-based intuitive management software, suitable for schools from K-12 to Universities. This software automates a school's tasks and makes all academic operations more efficient. The functionality of the system is summarized in Box 1.

#### Box 1: Functionality of SALA School Management System

- Class making & attendance checking
- Timetable design & management
- Transcripts & reports generation
- Students' scores & personal data management
- Communication through student app
- Staff management & access right distribution
- Billing Management (in accredited schools where are paying students)

The SALA platform was piloted at Prek Anchanh HS in 2019 and is now ready for being rolled out in other schools in 2020. During the reporting period, all teachers and administrators in four schools<sup>6</sup> were trained in using the system. Following the training workshop in each school, administrators are now able to use all features of the platform and change configurations according to local needs. Similarly, teachers are now able to use the app to manage attendance records and student marks. Data for the current academic year (i.e., Semesters I and II of the 2019-20 academic year) was also successfully entered for all four schools. Sisovath HS may also adopt the SALA program after having piloted a different school management system developed by *Wiki-school*. Although the first year of the pilot was free, Sisovath HS administrators are now considering whether they will buy the software license at \$10 per student or use the SALA software which is only \$5 per student, a considerable difference. Because New Generation Schools are autonomous, they have the right to determine what software programs are most suitable to their school.

<sup>6</sup> Prek Anchanh HS (Kandal), Prek Leap HS (Phnom Penh), Peam Chikong HS (Kampong Cham), and Hun Sen Kampong HS (Kampong Cham).

### 3.5 Website Development for New Generation Schools

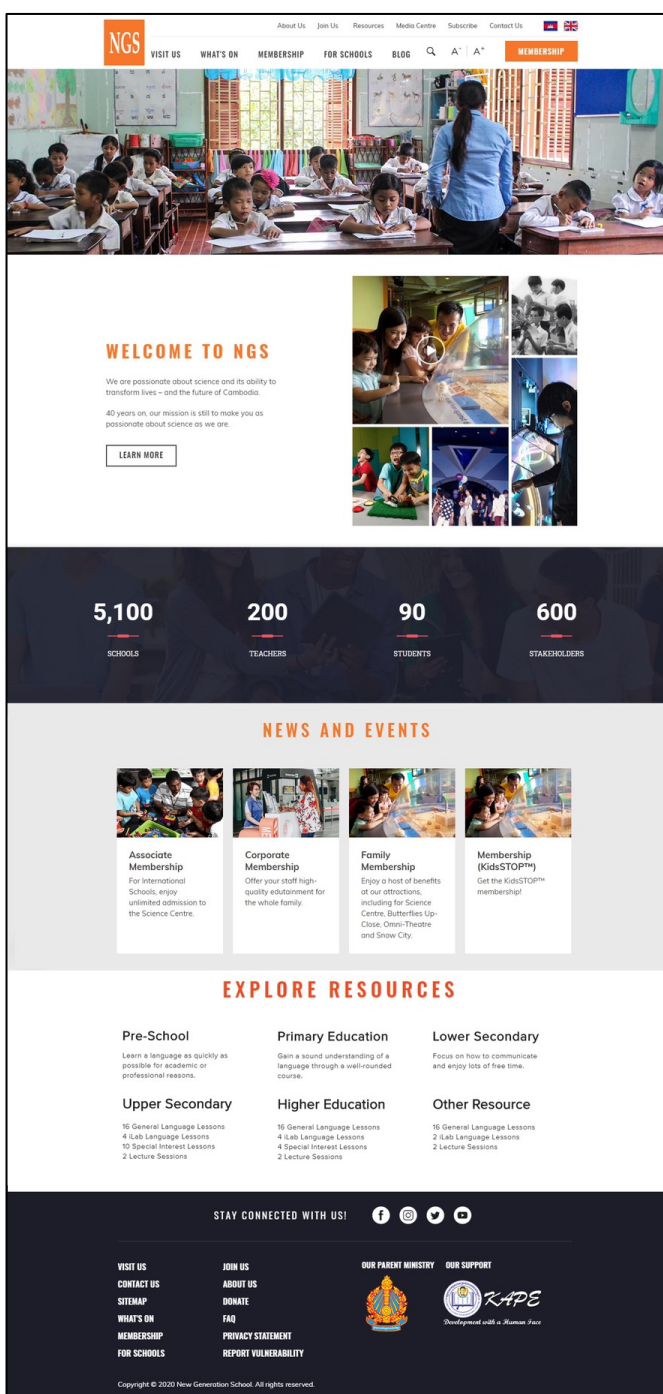
As the New Generation School System produces more and more documentation and sees an increasing amount of public interest in its educational services, the NGS Central Office has formulated plans to set up a website platform dedicated entirely to NGS programming. The website will enable teachers and other interested parties to submit applications for posted positions directly to NGS administrators and also allow students to sign up for entrance examinations electronically. Members of the public and government will also be able to access all educational resources produced by the program quickly and efficiently. This will include achievement reports, policy documents, technical manuals, question banks, background documents, and other kinds of educational resources. Users will also be able to access educational software that is used in New Generation Schools, particularly at primary school level where licenses are free. The functionality of the website is summarized in Box 2.

At the present time, the NGS Central Office has identified a website developer who is currently working on the proposed platform. A template for the website has already been developed (see inset) and when finalized, it will be possible for ICT staff to start uploading information onto this public site. It is expected that the website should be fully operational by the end of the school year.

A proposed template for the NGS Program Website →

#### Box 2: NGS Website Capabilities

1. Availability of General Data & Stats by School
2. General Inquiries
3. Latest News and Developments
4. Listing of Job Openings in All Schools & Electronic Applications
5. Electronic Student Applications for School Entrance Examinations
6. Access to NGS Publications & Resources





### 3.6 Planned Accreditation Visits & Anticipated Shifts to Parental Financing

As noted earlier, the formal accreditation of New Generation Schools continues to accelerate as more and more schools complete their three-year investment cycles. In 2020, it is expected that Prek Leap and Prek Anchanh HS will apply for accreditation at the end of the calendar year, as they complete three full years of investment (see Table 3.5). They will join four other schools (i.e., Preah Sisovath HS, Hun Sen Kampong HS, Kok Pring HS, and the Demonstration School) that have already achieved their accreditation in previous years. Prek Leap and Prek Anchanh HS have both achieved high standards of educational service provision and are extremely well-regarded secondary schools in their local communities with rising demand for admission. If they are accredited at the end of the year and there is every expectation that they will be, it will also be possible for these schools to formally request financial support from parents as per the MoEYS' approved policy. This development will be very important for budgeting purposes as the number of supported teachers in the NGS System continues to grow each year while funding levels for NGS development remain frozen.<sup>7</sup> Budgetary support from parents will help NGS programmers ensure that the system can continue to expand even though resource availability becomes more and more problematic.

Table 3.5: Past & Planned NGS Accreditation Visits, 2017-22

School Name	Province	Planned Accreditation Rate					
		2017	2018	2019	2020	2021	2022
1. Preah Sisovath HS	Phnom Penh	✓	✓	✓	✓	✓	✓
2. Prek Leap HS	Phnom Penh				✓	✓	✓
3. Hun Sen Kg Cham HS	Kg Cham	✓	✓	✓	✓	✓	✓
4. Peam Chikong HS	Kg Cham						✓
5. Prek Anchanh HS	Kandal				✓	✓	✓
6. Kok Pring HS*	Svay Rieng			✓	✓	✓	✓
7. Demonstration School	Kg Cham		✓	✓	✓	✓	✓
8. Angkor Ban PS	Kg Cham					✓	✓
9. Akhea Mahasei PS	Kg Speu					✓	✓
10. Svay Prahut PS*	Svay Rieng						✓
<b>Total</b>		2	3	4	6	8	10
<b>Projected Percentage of Accredited Schools</b>		20%	30%	40%	60%	80%	100%

\*Currently funded by Child Fund through KAPE.

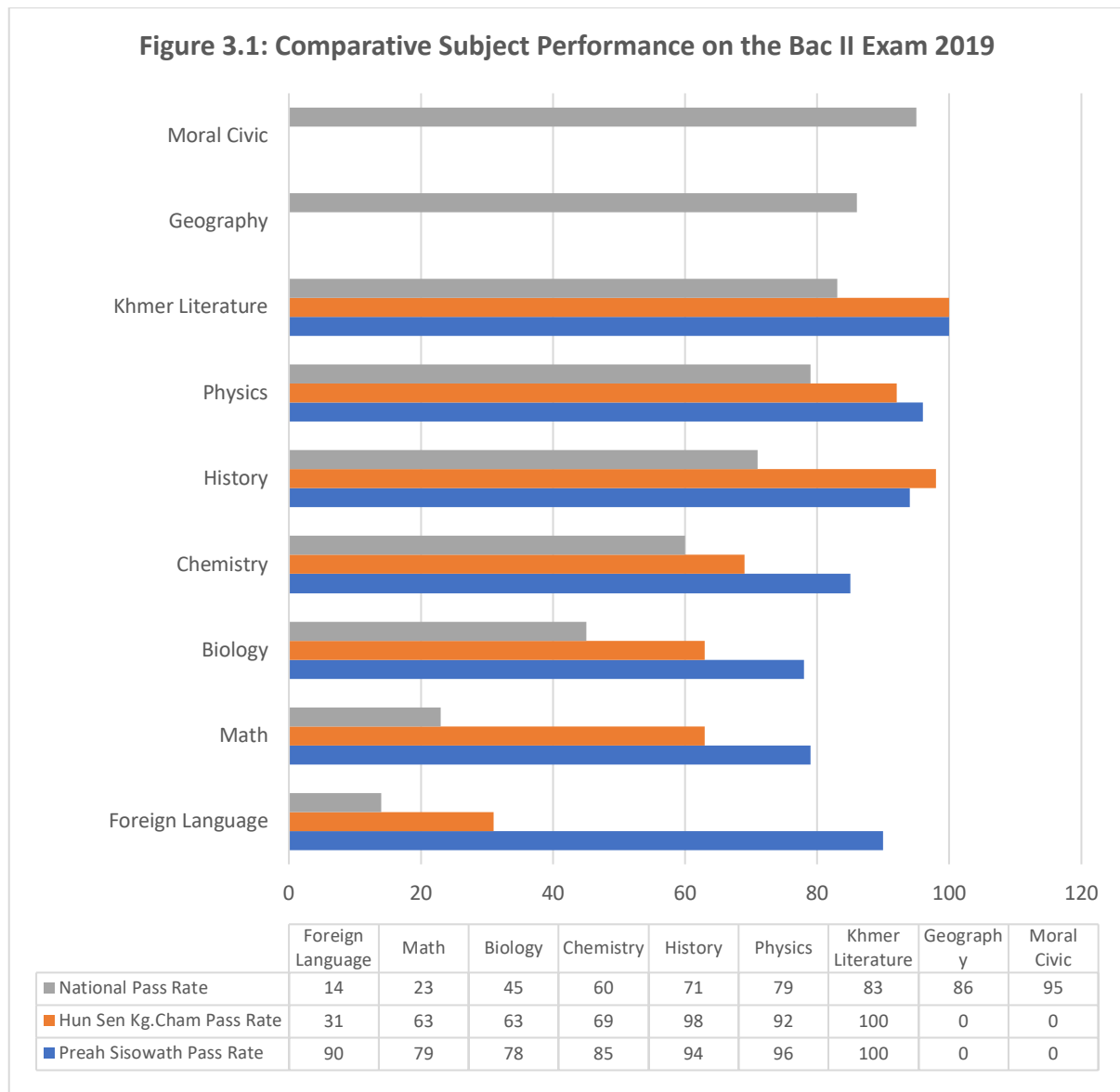
The accreditation process is a deeply time and resource intensive process. Although the process is often under-appreciated, it is the lynchpin within the NGS system for linking investment to performance. The accreditation framework in NGS underpins the whole process for making improved school accountability the central principle in NGS development. When there were only two schools applying for accreditation at the beginning of the NGS program, this process was manageable within the busy schedules of MoEYS staff who participate in animating the assessment of schools. Now that it is expected that 60% of schools will need accreditation visits in 2020 with steady increases in the

<sup>7</sup> In spite of frozen funding levels, the NGS Central Office has still been able to grow the program by shifting funds earlier designated for infrastructure upgrading in schools that have already completed their investment cycles (e.g., Preah Sisovath HS, Hun Sen Kampong Cham HS) to newer schools that still require funds for new teachers and classroom renovations. Parental contributions will greatly help to facilitate future expansion if, as expected, funding remains at its current levels.

future, the program has suggested the creation of a new position known as the *Accreditation Coordinator* who will focus full-time on ensuring that the accreditation process unfolds as planned. This position will necessarily increase in importance as investments in new NGS sites occur while older sites need continuous re-accreditation.

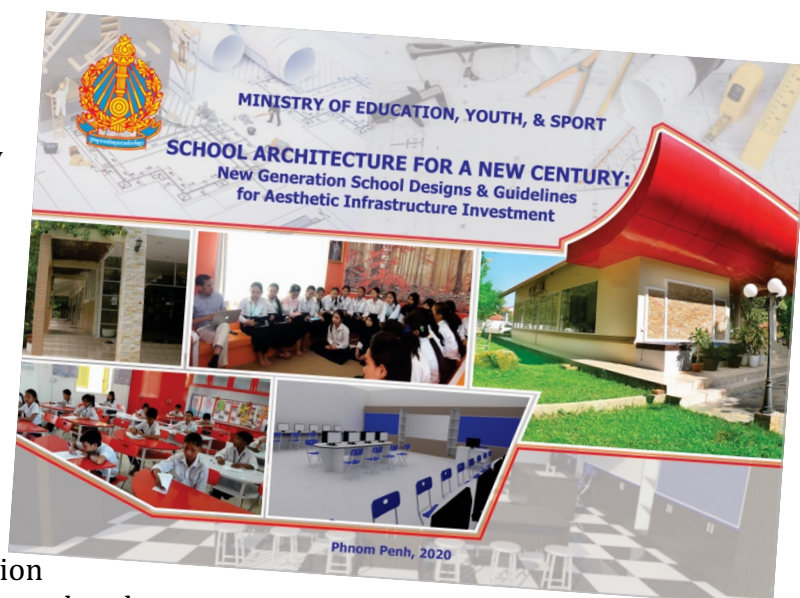
### 3.7 Preparations for the Bac II Examination

It is still not clear when Grade 12 students will be asked to take the *Bac II Examination*; however, all New Generation Schools with Grade 12 students have been very active in preparing their students online to continue their studies in preparation for the examination. As soon as a date is announced by MoEYS for the examination, schools will intensively provide additional support to all students without any irregular fees to replicate past high performance. A recent comparative analysis of last year’s Bac II Exam results indicates that both Hun Sen Kampong Cham HS and Preah Sisovah HS achieved higher pass rates than the national rate in all subjects but especially in Foreign Languages, Mathematics, Biology, and Chemistry (see Figure 3.1) where pass rates for NGS students were sometimes several times higher.



### 3.8 New NGS Publications

During the period of school closure, program personnel have been extremely busy in documenting various aspects of New Generation School development. This includes publications on Infrastructure & Design, 21<sup>st</sup> Century Libraries, Student Assessment, and Policy Development. The 21<sup>st</sup> Century Library Manual has now been completed and printed while a new publication on the architectural guidelines used in New Generation Schools has also recently been completed.



The English version of the architecture manual has now gone for printing while a Khmer version is currently being created. This new document is called, *School Architecture for a New Century* and it is hoped that this book will not only support the creation of NGS environments but may also have significant uses in other development projects. This book tries to make the point that Cambodia's education system has been using the same standardized school design for the last 70 years and that such designs no longer fit current educational needs. A limited edition of 200 hard copies has been completed and the soft version of the document will be available on the NGS Website.

#### Box 3: Selected New Design Ideas for Cambodian Public Schools

1. Promoting classroom configurations that can drive new pedagogies;
2. Introducing the use of modern materials such as glass, formica, chrome, and textiles;
3. Designing multi-functional furniture to match the physical contours of an educational space;
4. Improving coordination of colors to create 'visible harmony';
5. Considering more aesthetically pleasant appearances to make learning spaces more attractive.

The new architecture publication provides numerous guidelines for the configuration of learning spaces using modern principles of school architecture (see Box 3) while also providing numerous case studies in Cambodia, sample building layouts, price estimates for procurement purposes, and recommendations for future directions in school design in the Kingdom. The publication notes that modern design is in many cases no more expensive than traditional design and occasionally it is actually cheaper. The English version of this document will be disseminated among both senior government officials as well as donors while the Khmer version will be shared with provincial, district, and schools to help change the perspectives of Cambodian educators as this relates to school design.

### 3.9 Establishment of School-based Mentoring System

The New Generation School System is approaching the achievement of a major milestone as it prepares to set up a school-based mentoring system in all secondary schools. A first cohort of 25 Mentors are in the process of completing their Master's Degree Program at the *New Generation Pedagogical Research Center* at the National Institute of Education in Phnom Penh. About half of these degree candidates were recruited from within the NGS System and will be returning to their schools in their new role as mentors. The remaining degree candidates have expressed preferences to either join a New Generation School or go to another institution that focuses on teacher education (e.g., National Institute of Education, TECs, etc.). In all, it is expected that 17 of the current batch of 25 mentors graduating from the NGPRC will be assigned to a New Generation secondary school while the remainder will be posted at other teacher education institutions (see Table 3.6).

#### Box 4: Key Elements of School-based Mentoring System in the NGS Context

1. Mentors will still teach at their assigned schools to maintain their teaching skills but focus 75% of their time on mentoring and 25% on teaching.
2. Mentors will receive an extra stipend to incentivize their special role in the school.
3. Mentors will document all their work and archival footage of teachers teaching using new mentoring software called *Observic*.
4. Mentors will receive follow-up support from the *New Generation Pedagogical Research Center* to ensure that they are effective in their jobs and that the host institutions have provided an enabling environment to make them effective.
5. Mentors will be assigned to work with teachers using a ratio of not more than 15 teachers but not less than 10.
6. School-based Mentors are not intended to replace TGLs, rather their role is to supplement the regular duties of the TGL.

Table 3.6: Assignment of Mentors within the NGS System and Other Institutions, 2020

Recipient Institution	Total Mentors Assigned	Mentors Internal to the NGS System	Mentors External to the NGS System
<b>NGS Institutions</b>			
Preah Sisovath HS	4	2	2
Hun Sen Kampong Cham HS	3	2	1
Prek Leap HS	3	3	0
Prek Anchanh HS	3	1	2
Peam Chikong HS	2	1	1
Kok Pring HS	2	0	2
<b>Subtotal</b>	<b>17</b>	<b>9</b>	<b>8</b>
<b>Non-NGS Institutions</b>			
National Institute of Education	2	0	2
Teacher Education Center - Phnom Penh	3	0	3
Teacher Education Center - Battambang	3	0	3
<b>Subtotal</b>	<b>8</b>	<b>0</b>	<b>8</b>
<b>Total</b>	<b>25</b>	<b>0</b>	<b>8</b>

The NGPRC has sought to develop a policy framework for the placement and follow-up of mentors that graduate from the Center. This framework is reproduced in **Annex 2**. Key elements of the framework are also summarized in Box 4 above. Important considerations in this regard concern guidelines about how many teachers one mentor can support, how mentors should be remunerated, as well as the use of new software tools to amplify the effectiveness of mentoring activities. In this respect, mentors studying at NGPRC receive intensive training in the use of new technologies to promote both mentoring as well as improved pedagogical practices. The *Observic* software, developed in the UK and now contextualized to the Cambodian education system, is one such example. Sadly, most development partners appear to show little interest in the Ministry's investments in the NIE-based mentoring program while opting instead for large investments in shorter, lower quality mentoring courses of two weeks or less that use a cascade model for dissemination. In spite of this stance among most development partners, the NGPRC will continue to work closely with the NGS System to advocate for a more long-term solution to the issues of teacher support in the classroom both in the NGS network of schools as well as affiliated projects such as the ADB-funded Upper Secondary Education Sector Development Program (USE-SDP 2).<sup>8</sup>



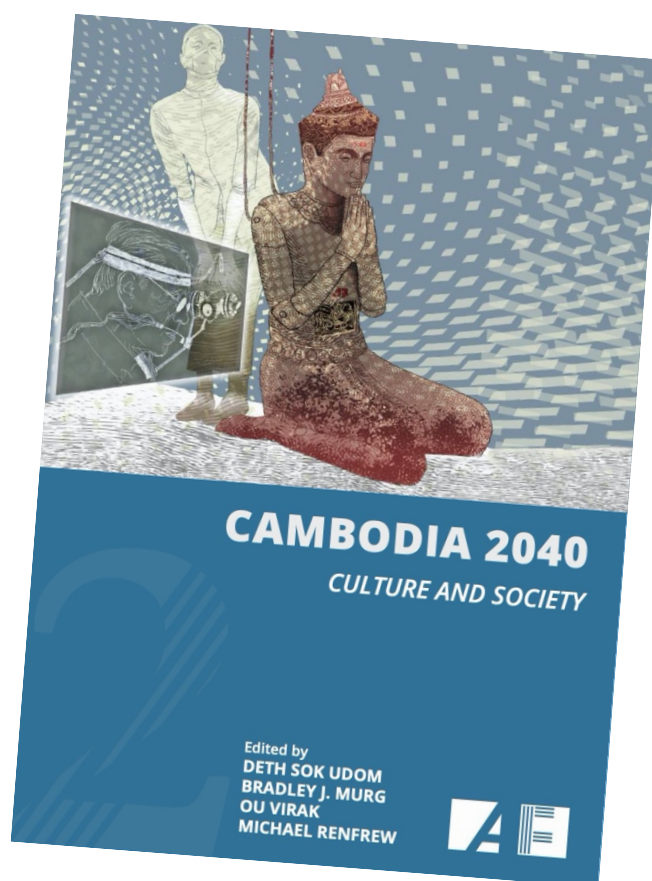
**Tech Savvy Mentors:** A group of prospective mentors study mentoring software programs as part of their degree requirements at NGPRC.

<sup>8</sup> The NGPRC will provide mentoring support to teachers working in 138 secondary schools that are part of USE-SDP programming. This support will be delivered through a Technical Assistance support contract between KAPE (which manages the Center on behalf of the Ministry) and MoEYS.

In addition, the NGPRC undertakes its missions in a spirit of continuous improvement. In this respect, an ambitious research program has been launched with a grant from *The Asia Foundation*. The overall aim of the grant is to assess the effectiveness of the mentoring program implemented by the NGPRC in order to improve its programming based on empirical evidence generated by the assessment. As soon as the schools reopen, the research team supported by the Centre will assess the effectiveness of mentoring in the NGS sites where NGPRC graduates have been posted. Eventually, the protocol governing the placement of mentors will be extended to other schools where mentoring is to occur. The aim is to better understand the needs of Cambodian teachers in terms of their continuous professional development, to facilitate the work of newly graduated mentors, and to refine the syllabus of the Center on a yearly basis.

### 3.10 Raising the Profile of New Generation Schools

The public profile of New Generation Schools continues to grow. Last year it was reported that NGS Reforms were presented in several publications and at several international conferences including the international conference of the *Comparative International Education Society (CIES)* in 2019. This year, NGS Reforms were analyzed in a recent publication by the World Bank called, *Cambodia in the Time of Covid19: Special Focus on Teacher Accountability and Student Learning Outcomes*.<sup>9</sup> This publication proposed three models of improved accountability in schools including the New Generation School Model, School-based Management Models<sup>10</sup> (e.g., Secondary Education Improvement Project), and Private Schools. Although this analysis focused on several criticisms of the NGS model including its cost and inclusivity (due to entrance examinations), the critique was generally positive and recognized the very high standard of educational quality that had been achieved in all sites as well as the rigorous structures to ensure school accountability. It is not clear what effect this report may have on future donor intentions to more broadly fund New Generation Schools, but it is an important achievement to



<sup>9</sup> <https://www.worldbank.org/en/country/cambodia/publication/cambodia-in-the-time-of-covid-19-coronavirus-economic-update-may-2020>

<sup>10</sup> It is actually somewhat of a misnomer to suggest that SBM and NGS models are different in terms of their use of School-based Management principles. In actuality, New Generation Schools use School-based Management approaches to a degree much higher than the World Bank's *Secondary Education Improvement Project* with schools in NGS evincing the autonomy to hire their own teachers, change the curriculum, and modify the timetable, which are not possible in SEIP sites. Thus, it should be recognized that both models use an SBM approach but that the difference between the two models lies in the degree to which such principles are utilized.

have established an accountability model that is now on the radar screen of the large development banks.

New Generation School reforms were also described in a new publication by the Adenauer Foundation as an important channel through which to revolutionize Cambodian education in terms of its use of digital education. This new book entitled, *Cambodia 2040: Culture & Society*<sup>11</sup> speaks glowingly about the potential of the New Generation School model to transform the education system from a fact-based learning model to one that emphasizes the higher processes of learning. In the chapter entitled, *Education: Pedagogy and Infrastructure* by Khoun Theara (Chapter 4), there are extensive discussions about how the NGS model offers the best foundation upon which to build a new education system that moves the economy from a labor-intensive to a knowledge-intensive model. Another chapter entitled, *Education: Inclusivity, STEM, and Smart Design* (Chapter 5) by Rath Setha provides a detailed descriptive narrative of key characteristics of New Generation Schools and how this model will be the forerunner of Cambodian 'Smart Schools.' This publication hit local book shops in June 2020 and appears to be selling rapidly.

The ability of New Generation Schools to attract the interest of academics as well as development partners is itself an important achievement for NGS programming. The extensive documentation of NGS programming and accompanying technical publications will provide an evidence-based platform for future replication of the model in other contexts (including in other countries). Such developments will be an important step for Cambodia to start attracting private investment to help the government expand New Generation Schools from the current 10 sites to at least one such center in each province.

### 3.11 Progress on Emplacement of NGS Programming at New Primary Schools

There are currently four primary schools in the NGS System, which are each at very different levels of development. Only one primary school has so far been accredited (i.e., Demonstration School of Kampong Cham). Primary schools are expected to adhere to the same high educational standards as secondary schools. It is expected that two more primary schools will become accredited next year (i.e., Akhea Mahasei PS and Angkor Ban PS) following the completion of their 3-year investment cycle. A fourth school (Svay Prahut PS in Svay Rieng) is still awaiting a re-commencement of investment by Child Fund following a recent resolution of a lack of classrooms at the school. A summary of some of the progress at each school up to the present time is provided in Table 3.7.

**Table 3.7: Status of Development at New Generation Primary School Level in 2020**

Description of Progress and Status	Accreditation Status
<b>Demonstration School</b>	
<p><b>General Progress:</b> The school has been accredited for two successive years and demonstrates very high standards of performance as per NGS guidelines. Students receive two hours of ICT instruction each week as well as intensive English. Teachers have been highly active in developing archival videos during the period of Covid19 closure and student engagement has also been reasonably high. The school is on track for another successful accreditation visit at the end of 2020.</p> <p><b>Current Grade Coverage:</b> Grades 1 to 6 (13 classes)</p>	Accredited

<sup>11</sup> <https://www.kas.de/documents/264850/9494366/Cambodia+2040+Culture+and+Society.pdf/2d86a754-1708-ca31-d78f-e70ac7b19aac?version=1.0&t=1593966925445>

Description of Progress and Status	Accreditation Status
<p><b>Teacher Activity:</b> Teachers have shown very high levels of compliance with educational standards and have also been very active in the development of online learning for students during the period of school closure. Indeed, the school has produced about 193 archival videos that have been shared with students online</p> <p><b>Infrastructure Investment:</b> The available infrastructure at the school is already at a very high standard and no new investment is currently planned.</p>	
<b>Angkor Ban PS</b>	
<p><b>General Progress:</b> Angkor Ban PS has shown dramatic progress as a New Generation School in spite of the fact that it is greatly handicapped by its very rural setting. Nevertheless, the school has shown good levels of management and high teacher engagement in the NGS program.</p> <p><b>Current Grade Coverage:</b> Grades 1 to 6 (10 classes)</p> <p><b>Online Education:</b> Due to the poor internet access in the local area and the observation that most families do not possess mobile smartphones, the school has not been able to mount an online education program.</p> <p><b>Teacher Activity:</b> The addition of new teachers who tend to be younger has helped the school to rapidly integrate ICT in instruction. The demonstrates high rates of library utilization and the use of new methodologies in teaching.</p> <p><b>Infrastructure Investment:</b> The school has received a new two-story building provided by MoEYS that almost doubles the capacity of the school.</p>	Planned for 2021
<b>Akhea Mahasei PS</b>	
<p><b>General Progress:</b> Akhea Mahasei PS has demonstrated very strong management and community support. Because of the size of the school, it has been adding grade levels to the NGS program gradually. In the 2020-21 academic year, it will start to provide service to Grade 4 students, leaving only two grades left before reaching full coverage. More rapid expansion has been hindered by the lack of buildings, since NGS programming requires that children study both morning and afternoon; however, this problem seems to have recently been resolved with a major investment in a new building (see Infrastructure Investment Section below).</p> <p><b>Current Grade Coverage:</b> Grades 1 to 4 (28 classes)</p> <p><b>Online Education:</b> Teachers at the school have been highly active in developing electronic lessons for students to use but have since had to move to more conventional channels of outreach due to the lack of internet access in the catchment area.</p> <p><b>Teacher Activity:</b> The majority of teachers at this school tend to be very young and have demonstrated marked ability to integrate the use of ICT devices into their instruction. Monitors give high marks for high standards of classroom instruction.</p> <p><b>Infrastructure Investment:</b> The construction department is currently building a 3-story building at the school, which will greatly expand its capacity and facilitate continued expansion in grade coverage to new grades.</p>	Planned for 2021
<b>Svay Prahut PS</b>	
<p><b>General Progress:</b> Investment at Svay Prahut was mostly suspended by Child Fund due to the lack of classroom space to teach for a full day. An assessment of the school noted that most teachers were not working a full day even though they were being paid to do so. With the addition of a new building, Child Fund may opt to recommence investment at the school starting in 2021. If so, this may facilitate planning to accredit the school by the end of 2022, as currently planned.</p> <p><b>Current Grade Coverage:</b> Grades 1 to 6 (12 classes)</p> <p><b>Online Education:</b> Due to the poor internet access in the local area and the observation that most families do not possess mobile smartphones, the school has not been able to mount an online education program.</p> <p><b>Teacher Activity:</b> With the suspension of development assistance from Child Fund, capacity development activities for teachers have been less frequent. Nevertheless, enough was done before the suspension of assistance to ensure that there is a strong foundation on which to build when capacity building activities recommence.</p> <p><b>Infrastructure Investment:</b> The provision of a new two-story classroom building for secondary school classes by the POE may free up space for the primary school to move to a full-day shift once again.</p>	Planned for 2022



### 3.12 Progress on Renewed NGS Building Renovations for 2020

With the arrival of funds from MoEYS in June, the program began once again to extend the modernization of schools, particularly at Prek Leap HS, Prek Anchanh HS, Peam Chikong HS, and Akhea Mahsei PS where grade level expansions have not yet been completed (see Table 3.2 presented earlier). As part of this year’s renovations, extensive investments are also being made in landscaping to ensure that there are ‘green spaces’ outside of classroom buildings in all sites for students to study and do specialized activities (see picture below). The program architect has started to develop detailed plans to guide these efforts in all schools. In some cases, class-



**Renewed Modernization Efforts in Schools Gets Under Way:** Workers begin the emplacement of new ceilings at a dilapidated building at Akhea Mahsei PS in Kampong Speu (above); Idealized view of landscaping at Prek Leap HS in Phnom Penh (below).



rooms that were renovated more than three years ago are also being repainted to ensure very high standards of maintenance in all schools.

In all, the program will be renovating and furnishing 31 new facilities this year including Science labs (4), ICT Labs (3), and new Student Clinics (2) as well as other rooms. These investments are summarized in Table 3.8 below and add to investments in 212 other facilities that have already been completed up until the end of 2019. Some of the facilities renovated this year are only being furnished as renovations are not necessary due to parallel investments in infrastructure by different donors (e.g., JICA at Prek Leap

HS). However, all rooms will be re-furnished using modern 'minimalist' designs recommended in recently completed NGS architectural guidelines (see Section 3.8).

**Table 3.8: Status of Infrastructure Renovations in 2020**

School	Facilities to be Renovated										Total	
	Non-science Classrooms	Science Labs	ICT Labs	Offices	Library	Bathroom	Wall painting (m2)	Clinic	Auditorium	Landscape (m2)		
	N	(m2)										
Preah Sisovath HS	--	--	--	--	--	1	--	1*	--	--	2	0
Hun Sen Kampong Cham HS	--	--	--	--	--	--	--	--	--	--	0	0
Prek Leap HS	4	3	1	--	--	--	402	1	1	--	10	402
Prek Anchanh HS	2	4	--	--	--	--	722.5	1	--	--	7	722.5
Peam Chikong HS	2	--	--	2	--	1	517.13	--	--	--	5	517.13
Angkor Ban PS	--	--	1	--	--	--	--	--	--	692.5	1	692.5
Akhea Mahasei PS	5	--	1	--	--	--	--	--	--	--	6	0
Demonstration School (Kg Cham)	--	--	--	--	--	--	--	--	--	--	0	0
<b>Total</b>	<b>13</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1,641.63</b>	<b>3</b>	<b>1</b>	<b>692.5</b>	<b>31</b>	<b>2,334.13</b>

\*Existing Clinic: minor renovations only

### 3.13 Progress on the Development of New Generation Preschools

Although MoEYS has so far been unsuccessful in procuring funds to establish New Generation Pre-schools (NGPS), KAPE has sought to assist the Ministry in this regard by identifying private funds to jump-start activity in this sub-sector. These funds are currently being provided by the *Phoenix Foundation* and are being used to create new physical designs for a modern preschool setting as well as technical assistance to support the development of specialized guidelines for teaching and learning in NGS-style preschool environments. These preschool investments will be made in 3 primary schools in Kampong Cham and Tbaung Khmum Provinces and will provide a good foundation for MoEYS to fund replication in Angkor Ban PS, as currently planned.



**New Generation Preschool Design:** Recently developed designs for a new kind of preschool are readied for implementation at the end of 2020. Under the new design, children will have access to multiple zones for study as well as electronic devices for digital learning.

### 3.14 Development of Mathematics Toolkits at Secondary School Level

Program planners have also organized Public Private Partnership collaborations by linking mathematics teachers working in New Generation secondary schools with a social enterprise called Thontean Obrom or TTO. TTO is engaged in the production of teaching aids and self-study games for Cambodian children and youth. These games are colorful and creative and are developed in Khmer Language to suit the national context. The partnership with TTO in this particular context is intended to help schools address the very high rate of failure among Cambodian youth in Mathematics during the Bac II Examination. In this regard, MoEYS has reported that 77% of students taking the Math Exam failed in 2019 (see Section 3.7). This is a huge failure rate. Although the pass rate in New Generation Schools is much higher than the rest of the country, it could still be improved. The collaboration with TTO is intended to help the NGS system develop a Mathematics Toolkit for secondary school level students. One toolkit will be provided to each NGS classroom.

During multiple meetings in June and July 2020 with about 10 Mathematics teachers from all New Generation Schools as well as a representative from the *New Generation Pedagogical Research Center*, a toolkit with over 20 math games and specialized teaching aids was completed. In general, these games and materials can be used with multiple lessons and topics and are designed to encourage cooperative learning and group work.



The math toolkits designed by NGS teachers will be mass produced by TTO and provided to all schools within the NGS system. The availability of these official math toolkits designed for secondary school students may also have additional knock-on effects for the rest of the education system, as these kits will be available for use in other non-NGS schools. Such knock-on effects demonstrate the great value of NGS investment not only for the students studying in such facilities but for the rest of the education system as well.



**Secondary School Math Toolkit Development:** Teachers work with TTO technicians to develop learning aid prototypes (above); Some samples of new learning aids developed by TTO (left).

### 3.15 Declining Unit Costs at Accredited Schools and Planning for Sustainability

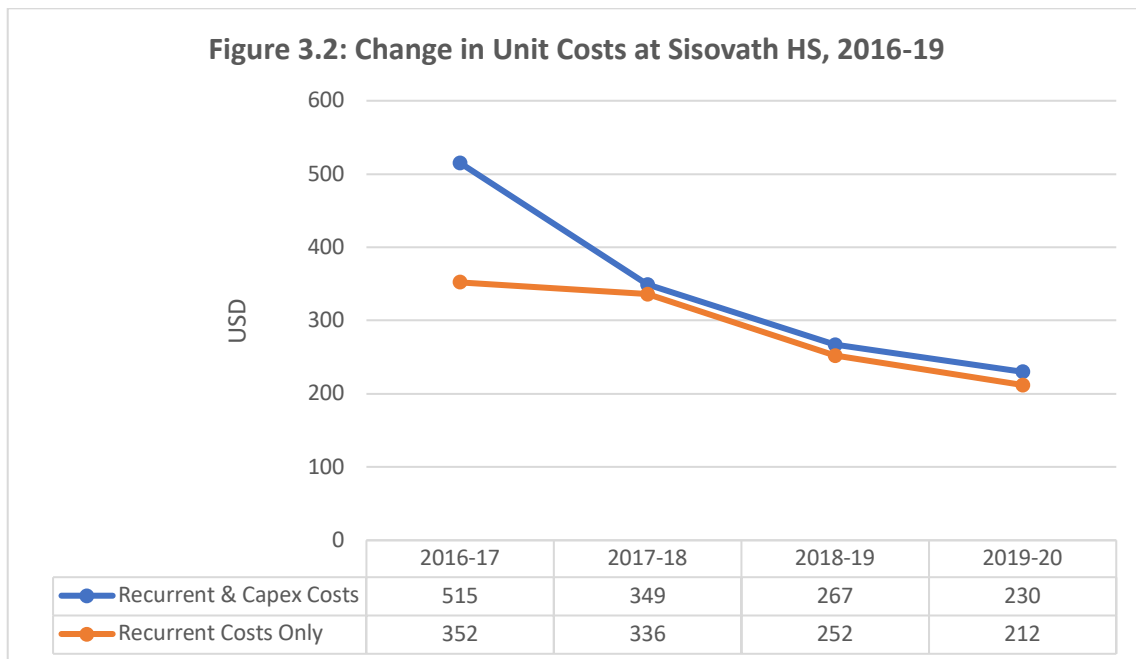
**Unit Cost Analysis:** The unit costs for NGS investment are an area of great importance that have recently been misrepresented in some new publications. Unit costs for NGS emplacement have sometimes been misunderstood because researchers have not distinguished between recurrent running costs and one-time investments for capital expenditures. The analysis presented below helps to provide a more accurate overview of how unit costs have been declining at New Generation Schools as the accreditation process accelerates and parents enthusiastically increase their financial support. The calculation of unit costs in this report has focused on Sisovath HS, as this school has received perhaps the most investment of any New Generation School so far. Expenditures at Sisovath HS have ranged between \$400,000 and \$500,000 per year over the last four years though more than half of this cost has now been shifted to parents, since the school received its accreditation. As noted above, unit cost estimates for NGS investment are best understood when considering both recurrent running costs as well as capital expenditure costs (see Box 5).

Using the narrowest estimation of costs (i.e., those that primarily comprise recurrent expenditures), unit costs at Sisovath HS now stand at **\$211** per student, having dropped from almost \$352 per student at the start of investment in 2016 (see Figure 3.2). Support costs that include both capital expenditure and recurrent costs are not much different from those involving recurrent costs alone and now stand at **\$230** per student in 2020. Importantly, these costs have dropped from \$515 per student at the start of investment. This convergence in unit costs stems mainly from the decline in capital expenditure.

**Box 5: Definition of Unit Costs**

1. **Recurrent Costs plus Capex** includes all direct running costs (e.g., teacher incentives, utilities, software licenses, consumable materials, etc.) and capital expenditures (e.g., infrastructure renovations, furniture, and equipment)
2. **Recurrent Costs Only** refers to direct running costs of the school only without layouts for capital expenditure.

**Figure 3.2: Change in Unit Costs at Sisovath HS, 2016-19**



In all cases, the direction of unit costs appears to be downwards (see Figure 3.2). These trends also appear to be helped along by increasing enrolment at Sisovath HS as well as the diminution of capital expenditures, as noted above. The high unit costs reported for NGS investment are sometimes misrepresented by failing to mention that capex costs are diminishing while enrollment is increasing.

**Future Vision for Investment:** MoEYS' expectation is that unit costs will stabilize at their current levels but will likely decline further for government as parents continue to make major contributions to running the school and maintaining the standards required for continued accreditation. Indeed, the adherence to accreditation standards is the key strategy employed by NGS reforms to ensure that investments (and educational quality) do not become diluted as programming becomes older. This is why NGS is not thought of as a time-bound 'project' but rather as an open-ended educational reform.

KAPE's role in helping MoEYS to support mature New Generation Schools such as Sisovath HS will also likely evolve to promote a process of renewal to ensure that educational programming continues to be dynamic and not static. For example, KAPE will be supporting all New Generation Schools to emplace school-based mentoring systems in 2020 linked to the recently established *New Generation Pedagogical Research Center (NGPRC)* at the National Institute of Education (see Section 3.9). This mentoring system will be a major step towards sustaining high quality human resources at all New Generation Schools. The system will first be piloted at Sisovath HS before its expansion to other schools, further establishing Sisovath HS as a Center of Excellence as per the oft-expressed desire of the Ministry. Links between Sisovath HS and NGPRC will also start to generate empirical research about what works best in the Cambodian context, creating for the first time a locally grown body of evidentiary data that can inform policy and reform. This body of research will also provide highly useful data for training institutions such as NIE and Teacher Education Centers. Indeed, KAPE has already helped the NGPRC procure private research funding to support an empirical evaluation of the new mentoring system leading to the first of many peer-reviewed scholarly research publications generated by the Center.<sup>12</sup>

Maintaining the dynamism of New Generation Schools such as Sisovath HS will likely focus heavily on employing technology and software in new and innovative ways, as the global education system continues to evolve and change rapidly. Tech support from KAPE and other Non-state Actors will hopefully help MoEYS to maintain New Generation Schools as nurseries for educational innovation that is contextualized to the Cambodian situation.

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<sup>12</sup> KAPE has helped the NGPRC to apply to the *Ponlok Chamnaes* Research Fund for a small research grant that will be the first of many research grants that the centers receives.

## 4. CHALLENGES AND ISSUES IN IMPLEMENTATION

### 4.1 The Extended Closure of Schools

The closure of schools due to the Covid19 crisis has been quite disruptive to NGS programming this year. In addition to regular classes, the program has had to cease all programming relating to such major events as Parents' Night Shows and associated project work, preparation for the Bac II Examination, participation in international competitions, life skills activities, exposure visits, student club activities, accreditation visits, and other activities. All of this will have the effect of greatly setting back students' learning, particularly for Grade 12 students who are most concerned about their transition into a tertiary institution. In spite of these obstacles, however, school libraries have remained open and all but one secondary school have developed and implemented an extensive online education program to ensure that learning does not completely cease. But as the figures in Table 3.4 demonstrate (see above), student participation in online education activities only ranges from 49% to 74%, suggesting that a large number of secondary school students, particularly at primary in the lower grades, are not able to learn through the learning channels established.

### 4.2 Increasing Investment in Online Education

The Covid19 pandemic has heightened the need to use other communication channels for educational instruction that move beyond the classroom. The pandemic may actually accelerate pre-pandemic planning to consider a '*Flipped-Classroom*' arrangement (see Box 6) in which part of students' learning occurs in a dynamic way outside of the classroom (e.g., at the library, at home, etc.) where they do research, project work, or other learning tasks. This planning is already far advanced at some New Generation Schools such as Sisovath HS and will most certainly occur at additional New Generation Schools in more urbanized environments. However, the lack of internet and the poor penetration of mobile devices in more rural areas such as Peam Chikong HS in Kampong Cham and Kok Pring HS in Svay Rieng pose more of a problem. These obstacles have greatly impacted online learning in these schools already. NGS Programmers will consider ways to address these problems that may include increasing the availability of mobile devices at

#### Box 6: What is a Flipped Classroom?

A Flipped Classroom refers to a "pedagogical approach in which direct instruction moves from the group learning space of the classroom to the individual learning space and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter."

#### Box 7: How Offline Hubs Work

Offline hubs are devices that enable local stakeholders to use an intranet network connection to access educational materials at high speed at no cost. Such hubs will enable students and teachers to download information (at the school as a hub) for free and work offline. This intervention involves the use of 'Raspberry Pi' devices so the hub can store selected content. At the same time, the school can update content frequently on a bi-weekly or monthly basis by bringing the device to any place with an internet connection. This proposed technology can work in remote areas as long as the teachers and students have a smart phone. However, the implementation of this intervention will require developing a specialized mobile app to enable the linkage between stakeholders' phones and the hardware device. This would be scalable to hundreds of schools in the long-term.

schools<sup>13</sup> (e.g., for borrowing) and installing *Offline Content Hubs* (see Box 7) at schools so that teachers and students can download materials from the internet even in locations where internet service is both expensive and limited.

### 4.3 The Status of Accredited but Unsupported Schools

There continue to be several schools in the NGS system that have been accredited but which are still not receiving any direct support from MoEYS. This includes Kok Pring HS in Svay Rieng Province and the Demonstration School (a primary school) in Kampong Cham Province. Both schools achieved their accreditation in 2019, which was a major milestone in their development. Currently, Kok Pring HS is supported by Child Fund Australia while the Demonstration School is self-supporting with parental donations (though it also benefits from sharing the same facilities as Hun Sen Kampong Cham HS where it shares the same compound. Nevertheless, according to MoEYS' New Generation School Policy, any accredited NGS institution is entitled to direct support from the government, at least for those students whose parents are unable to pay any voluntary support fees through the *Social Equity Fund* concept. However, within the context of frozen levels of funding for NGS programming, it has not been possible to adhere to this provision in the policy. KAPE and Child Fund Australia have both been advocating for about \$15,000 (60 million CR) in annual support for each school but without success at this time. And given the collapse in government revenues due to the Covid19 crisis, it is unlikely that government is going to be able to expand the NGS budget any time soon to accommodate this need.

### 4.4 Teacher Resistance to Joining NGS at Prek Leap, Prek Anchanh, & Peam Chikong HS

As Prek Leap and Prek Anchanh High Schools prepare to expand to Grade 11 in the 2020-21 academic year, they will be encountering a hard-core group of teachers at the higher grade levels who are quite wedded to a 'rien kua' mentality as the *raison d'etre* of their teaching. Outreach to these teachers to voluntarily join the program has so far not been very successful. In this respect, only 4% of the teachers at Prek Leap have volunteered to join the program while 13% of teachers at Prek Anchanh have volunteered to do so (see Table 4.1). The primary reason for their unwillingness to join the growing New Generation School program is that NGS Policy Guidelines require them to give up their private 'rien kua' classes, which they refuse to do, even though they would receive an incentive to compensate them.

**Table 4.1: Anticipated Teacher Needs for Grade 11 in Prek Leap & Prek Anchan HS, 2020**

School Name	Total Teachers Needed for Grade 11	Teachers Currently Teaching Grades 11 & 12	Teachers in Grade 11 Who Agree to Join NGS	%	Additional Teachers That Need to be Recruited
Prek Leap HS	15	47	2	4%	13
Prek Anchanh HS	13	23	3	13%	10
<b>Total</b>	<b>28</b>	<b>70</b>	<b>5</b>	<b>7%</b>	<b>23</b>

<sup>13</sup> New Generation Schools generally receive about 60 tablets or other mobile devices for storage in the library as part of the standard investment package in each school.

A similar problem can be found at Peam Chikong HS where the school is expanding to Grade 10 in the 2020-21 academic year (see Table 4.2). At Peam Chikong HS, only 8% of upper secondary school teachers have volunteered to join the program.

**Table 4.2: Anticipated Teacher Needs for Grade 10 in Hun Sen Peam Chikong HS, 2020**

School Name	Total Teachers Needed for Grade 10	Teachers Currently Teaching Grades 10-12	Teachers in Grade 10 Who Agree to Join NGS	%	Additional Teachers That Need to be Recruited
Hun Sen Peam Chikong HS	14	52	4	8%	10

There is no easy solution to this problem, since forced compliance will not work. The New Generation School System only wants teachers at each school who want to be there, not those who are forced to do so, since such individuals, with their bad practices, could potentially undermine the whole culture of professional behavior at the school. The only solution is to recruit teachers from outside of the school to fuel the expansion while encouraging non-compliant teachers to transfer to other schools. At some point when all grades are covered by the program, these teachers will be redundant and will have no classes to teach, creating an incentive for them to move.

#### 4.5 Misrepresentation of NGS Unit Costs

As noted in Section 3, recurrent unit costs are declining at accredited schools within the New Generation School System, particularly as parents start to pick more and more of the costs. Nevertheless, some development partners have recently issued publications that maintain the fiction that the New Generation Schools entail continuously high unit costs, when in fact these are declining in most schools where capital expenditures have been completed. The fiction that New Generation Schools are too expensive to replicate is one of the primary arguments against additional investment to expand the model to other locations. It is, therefore, important for NGS advocates to push back against this misinformation and better inform development partners and members of the general public about the true nature of the unit costs entailed by this educational reform.



## 5. CONCLUSIONS

**Key Achievements:** The implementation of New Generation School Reforms has been a bright spot in MoEYS' efforts to improve educational quality. Between 2015 and 2019, MoEYS had invested about \$4.8 million in the NGS system for school modernization as well as policy and curriculum development. These schools have not disappointed and have reported very encouraging outcomes on a number of important metrics including very high pass rates on the national Bac II Examination, high transition rates to university, very low dropout rates, an accelerating rate of school accreditation, and high professional standards among teachers (see Table 5.1). Many of these indicators move beyond test scores and demonstrate the ability of students who study in these schools to compete successfully in international academic competitions and evince high rates of transition to university. In addition, learning appears to have broken out of an exam-driven mode leading to a profusion of project work completed by students. For example, in 2019, students enrolled in secondary New Generation Schools completed 490 group projects on topics of their own choosing. This was a significant breakthrough in the culture of learning, which is still very much exam-driven.

**Table 5.1: Key Metrics for New Generation Secondary School Performance (2019)**

Metric	NGS	National
1. Bac II Examination Pass Rate:	91% <sup>14</sup>	68%
2. Students with A, B, or C Bac II Pass:	35%	8%
3. Transition to University:	88%	13.69%*
4. Students Receiving Medals/Awards:	612	n/a
5. Students studying ICT 3 hrs/week or more:	100%	0%
6. Dropout Rate:	4%	LSS: 16% USS: 17%
7. Secondary Schools Accredited:	83% <i>(Projected by Dec 2020)</i>	n/a
8. Secondary School Teachers with 4-Year Degrees or Higher:	86%	43%
9. Teachers Completing Career Path Plans:	98%	n/a
10. Student Projects Completed per year:	490 Projects (1 project per 6 students)	n/a

\*Gross Enrolment (Tertiary)

Sources: MoEYS, 2020; EMIS, 2019; World Bank, 2018

**Competition with Private Sector:** NGS administrators have also been reporting that many of the students enrolling in their schools are returning from the private sector, which demonstrates the ability of public schools to effectively compete with private schools when conditions of governance improve. Indeed, one New Generation School in the capital reported that demand for enrollment was so high that it was only able to accept 19% of the students applying due to a shortage of seats.

**Knock-on Effects:** The NGS initiative has also been driving innovation in the secondary education sub-sector leading to partial replication in a number of larger bank-funded projects, thereby fulfilling high expectations among MoEYS leaders for knock-on effects. In addition, the high extent to which technology is being used in the NGS system has also

<sup>14</sup> It is important to note that all NGS students are enrolled in the Science Stream where the Bac II Exam pass rate is only about 50% compared to the social science stream where the pass rate is about 80%.

provided a useful foundation for MoEYS planning to address school closures resulting from Covid19 including the production of hundreds of archival video lessons that are being presented online as well as other general resources for online education. Similarly, the NGS system is pioneering a system of school-based mentoring that links with a special training center established at the National Institute of Education (NIE) for this purpose. In this respect, MoEYS established the *New Generation Pedagogical Research Center (NGPRC)* at NIE to train experienced secondary school teachers (often recruited from NGS sites) to work as full-time, school-based mentors in all NGS sites. Candidates recruited to the center study intensively for one year and receive a Master's Degree in Mentoring before being posted at a New Generation School. These innovations will be a major step towards *Continuous Professional Development* goals at New Generation Schools and ensure the development of an emerging model of non-threatening professional support to all teachers. In addition, NGS programming is generating new exemplars in modern education for the public education system in a wide range of areas from modern school architecture, to 21<sup>st</sup> Century Libraries and digital learning and many others. These exemplars and the accompanying documentation are helping to drive modernization of the Kingdom's education system.

**International Recognition & Good Press for Cambodian Education:** Finally, the New Generation School Initiative is attracting international attention. In this regard, the program has been showing up in multiple international publications published by Springer Press (of Singapore), Harvard University, the Adenauer Foundation, and the World Bank. The program was also recently presented at the *Comparative International Education Society Conference* in San Francisco in 2019. Other nations in the region are now showing interest in the model and replication has already started in Lao PDR and Myanmar, leading to an interest to send international students to attend the Master's Degree Program (which is taught in English) at the NGPRC at the National Institute of Education. Thus, the New Generation School initiative is not only benefiting Cambodia's education system but is also bringing international praise and recognition to the Kingdom.

## Annex 1: NEW GENERATION SCHOOL SYSTEM

### Teacher Weekly Checklist Report for Online Education Activities (For Validation of Incentive Payment)

Teacher Name: \_\_\_\_\_ Subject Taught: \_\_\_\_\_

School Name: \_\_\_\_\_ Grades Taught: 7 8 9 10 11 12 (Please circle one)

Month/Week: \_\_\_\_\_ / Week: 1 2 3 4 (Please circle one)

Please Indicate the Classes for which you are responsible: \_\_\_\_\_ (e.g., 7A, 8A, etc.)

No.	Questions	School Director Notes
1.	How many of your classes did you meet remotely this week? <input type="checkbox"/> 1 Class <input type="checkbox"/> 2 Classes <input type="checkbox"/> 3 Classes <input type="checkbox"/> 4 Classes	
2.	How many lesson plans should you have presented to students this week? <input type="checkbox"/> 1 Lesson <input type="checkbox"/> 2 Lessons <input type="checkbox"/> 3 Lessons <input type="checkbox"/> 4 Lessons	
3.	Where did you get the lesson presentation that you showed on line? <input type="checkbox"/> Used the MoEYS Lesson Archive. <input type="checkbox"/> Used a non-MoEYS Archive <input type="checkbox"/> Made my own content/video <input type="checkbox"/> Used a combination of my own content and content from an archive.	
4.	What applications did you use to deliver the content/Meet your students? (Check all that apply if you used more than one app) <input type="checkbox"/> Youtube Channel. <input type="checkbox"/> Google Classroom. <input type="checkbox"/> Telegram. <input type="checkbox"/> Messenger. <input type="checkbox"/> Sala Platform. <input type="checkbox"/> Other: _____	
5.	What applications did you use to create your content? (Check all that apply if you used more than one app) <input type="checkbox"/> PowerPoint. <input type="checkbox"/> Microsoft Word. <input type="checkbox"/> Video App. <input type="checkbox"/> Screen Capture App <input type="checkbox"/> Other: _____	
6.	How did you meet your students? <input type="checkbox"/> Met them in real time. <input type="checkbox"/> Interacted with them but not in real time <input type="checkbox"/> I uploaded content only but did not interact with my students.	
7.	To what degree was your assessment in Item 6 true of each of your classes? <input type="checkbox"/> True for ALL of my classes. <input type="checkbox"/> True of MOST of my classes. <input type="checkbox"/> True of SOME of my classes only	

No.	Questions	School Director Notes
8.	Did you assign questions or exercises to your students to answer? <input type="checkbox"/> Yes. <input type="checkbox"/> No	
9.	To what degree was your assessment in Item 8 true of each of your classes? <input type="checkbox"/> True for ALL of my classes. <input type="checkbox"/> True of MOST of my classes. <input type="checkbox"/> True of SOME of my classes only	
10.	Were you able to use a Learning Monitoring System to track student attendance? <input type="checkbox"/> Yes. <input type="checkbox"/> No	
11.	Please indicate the approximate degree of 'participation' of your students in the remote lesson this week:  Class _____: _____% Class _____: _____% Class _____: _____% Class _____: _____% <i>e.g., Class 7B: 80%</i>	
12.	How did you estimate students' attendance? <input type="checkbox"/> Used LMS Feature <input type="checkbox"/> Reviewed the number of exercises received back from students. <input type="checkbox"/> Used my own best guess/estimate <input type="checkbox"/> Other: _____	

Submitted by: \_\_\_\_\_ Teacher's Signature

I have reviewed the teacher *Weekly Online Education Report* above and have determined that the teacher has **NOT** fulfilled the requirements for an incentive payment.

I have reviewed the teacher *Weekly Online Education Report* above and have determined that the teacher has fulfilled the requirements for an incentive payment.

Reviewed by: \_\_\_\_\_ (Reviewer's Name)

\_\_\_\_\_ (Reviewer's Position)

\_\_\_\_\_ (Reviewer's Signature) Date:

## Annex 2:

### RECOMMENDED POLICY FRAMEWORK FOR MENTORING

August 20, 2020  
Draft

## 1 DEFINITION

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For the current policy framework, Mentors are defined as expert teachers who provide pedagogical support to other teachers in a one-to-one relationship. Mentors who graduate from the New Generation Pedagogical Research Center will hold a Master's Degree of Education in Mentoring. Mentors who graduate from the NGPRC are not coaches. In this respect, it should be noted that 'Mentoring is oriented around relationships.' Although the mentor and mentee might initially focus on certain learning goals or competencies, over time they develop a bond and rapport that often transcends specific workplace issues. On the other hand, 'Coaching is oriented around defined tasks.' Coaches are often called upon to help individuals become more proficient in certain areas or address important workplace skills they might be lacking. Some examples might include using a specific curricular document, employing a specialized set of materials, or following a scripted lesson plan. Thus, it is important that the policy governing Mentors should clearly distinguish between what a Mentor does and what a Coach does.

## 2 ELIGIBLE INSTITUTIONS WHERE MENTORS MAY BE POSTED

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### 2.1 KIND OF INSTITUTIONS FOR MENTOR PLACEMENTS

Three kinds of institutions are eligible to host NGPRC mentors:

- Schools within the New Generation School System
- Ordinary Public Schools
- Teacher Training Institutions, such as Teacher Education Centers and the National Institute of Education.
- Provincial or District Offices of Education where there is need for Office-based Mentors.

The highest priority for NGPRC is to post mentors to New Generation Schools to ensure the sustainability of such schools' high teaching standards as well as a possible expansion of the NGS System that may occur in future years.

Public schools, training institutions, and provincial/districts offices of education may also request mentors, preferably one year in advance of their posting. By doing so, such institutions accept the mentoring policy, and they commit themselves to providing their mentors with good working conditions and an accommodative institutional structure. Requests for mentors should be submitted to the NGPRC, and will be reviewed in accordance with the current priorities set by MoEYS.

## **2.2 MATCHING SYSTEM**

It is important that Mentors and the institutions where they will be posted are well-suited to one another. If Mentors are placed in institutions where they are not happy, they may request a transfer to another institution after a short time or may not be effective, or both. In order to reduce such risks, a placement fair will be organized each year to let NGPRC graduates and school directors meet each other, before any graduates express a preference for their ultimate place of posting. NGPRC will provide the participants with all the relevant information needed to make a well-informed decision about where they would like to be posted (e.g., academic achievement of the candidates, age, academic background, previous experience). The institutions that require NGPRC Mentors will similarly provide information on their objectives, facilities, organization and teaching philosophy in the form of leaflets or posters. A short orientation workshop might be organized for institutions receiving Mentors beforehand to explain the mentoring system, if the directors of these institutions request it. After meeting as many school directors as possible, NGPRC graduates will rank their preferences while the schools may rank the candidates as well, based on the information provided.

As long as the graduating classes of NGPRC degree candidates are small enough, the faculty will seek to find suitable placements for Mentors through discussion in order to accommodate personal preferences. If this method proves to be impractical, a dedicated matching algorithm will be designed to match mentors and schools.

## **2.3 WHERE SHOULD MENTORS BE BASED?**

Ideally, Mentors will be based in specific schools, preferably secondary schools, in order to be as close as possible to their Mentees. Mentors may also be placed in other institutional settings where they provide support to larger groups of individuals such as a training institution. However, school-specific locations are more ideal for Mentor placements.

## **2.4 ZONE OF INTERVENTION**

- Firstly, Mentors should be based in their assigned school.
- On request, and with the permission of the school director, Mentors may also be made responsible for other schools in the vicinity.
- At the request of NGPRC and with the approval of their immediate supervisor (e.g., a school director), Mentors may also be used for the delivery of specific workshops as determined by MoEYS. In such cases, Mentors will be properly remunerated for their services with respect to daily subsistence and user fees.

# **3 TASKS OF THE MENTORS**

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## **3.1 MENTORING TASKS**

The tasks undertaken by Mentors may include any or all of the following:

- Classroom observations (followed by post-conferences)
- Consultations (to prepare lessons and other teaching activities)

- Co-teaching (this is meant to build up the skills of the hosting teacher, not to replace him/her in any way, i.e., Mentors are not intended to be substitute teachers)
- Classroom Demonstrations (Mentors can demonstrate new techniques to the hosting teacher, but they are not supposed to replace him)

### 3.2 TEACHING SERVICE

Mentors must have some credibility as teachers. That is, they must be able to show that they have actually taught students. Consequently, it is important that Mentors continue to engage in teaching at the schools/institutions where they may be posted. Nevertheless, teaching responsibilities assigned to Mentors should be limited to not more than one-third of their total working time. The remaining time should be focused on fulfilling their mentoring duties. School directors should not use Mentors to fill gaps in their timetables, which may distract Mentors from their main duties. In addition, Mentors should not be used as substitute teachers.

### 3.3 REMOTE OBSERVATIONS VIA OBSERVIC

Under certain circumstances, it may be necessary for Mentees to submit a video of their teaching to a Mentor remotely using the *Observic* Platform, which is a new mentoring software contextualized to the Cambodian education system. Such circumstances may include some of the following situations: (i) the teacher cannot find adequate support in the school about a particular subject-matter that is not the specialty of the available mentors; (ii) the available mentors are too busy; (iii) the teacher doesn't feel comfortable with the available mentors, etc.

When using the *Observic* platform, the Mentee can choose the Reviewer, if the latter is available.

Every Mentor in the NGS network will participate to the remote observation program as Reviewers. Other Mentors may also participate in the *Observic* Platform, especially alumni from the NGPRC. The complete list of Mentors doing remote observations will be accessible via the *Observic* platform.

Mentors should be conversant in using the *Observic* Platform and will be able to provide technical assistance through the *Observic* Platform.

Specific guidelines are available for *Observic* at the following link: [create a link]

### 3.4 OTHER MENTOR TASKS

Other Mentor tasks may include, but are not limited to, the following:

- Conducting workshops and other training sessions, both in their assigned schools or outside.
- Writing articles, in Khmer, to answer questions raised by teachers during their interventions. Dedicated online platforms will be developed by the NGPRC for this purpose.
- Animating professional teams, through social media or physical presence. For this purpose, Mentors will use platforms created by the NGPRC or other platforms provided by the learning community where Mentors are based.

Specific tasks should be negotiated between the school directors, the Mentors and the institutions where Mentors are based. The NGPRC will provide support and advice to assist posted Mentors in cases where they are presented with difficult problems or issues.

## 4 ASSIGNING MENTEES TO MENTORS

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### 4.1 DETERMINING THOSE TEACHERS WHO ARE ELIGIBLE TO RECEIVE MENTORING

Schools should designate teachers as Mentees using the following considerations:

- All new teachers in a school must be assigned to a Mentor.
- All teachers recently recruited into the school from other institutions, regardless of their previous experience must be assigned to a Mentor
- Teachers on staff with less than 5 years of experience must be assigned to a Mentor.
- Other teachers with more than 5 years of experience may volunteer to be a Mentee but are not obligated to do so.

### 4.2 PAIRING MENTORS AND MENTEES TOGETHER

To the degree possible, Mentees should be allowed to choose their Mentors.

It is recommended to match Mentors and Mentees according to their subject-matter. But this is not an absolute necessity.

TRUST IS THE KEY to building a productive Mentor-Mentee relationship. In this respect, Trust is more important than technical expertise.

## 5 TEACHER-MENTOR RATIO

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The NGPRC recommends a ratio of between 10 and 15 teachers per Mentor. This Teacher-Mentor Ratio will be re-evaluated on a regular basis to take the actual workload and local circumstances into account. The NGPRC will conduct yearly research to determine the optimal ratio.

The assignment of Mentors should be based on a careful assessment of the needs of the school including the total number of teachers, their years of experience, the quality of instruction, and other relevant factors. The number of Mentors assigned to a school should be based on commensurate needs.

Ideally, at least two Mentors should be assigned to a school so that they can provide support to one another.

## 6 MENTOR ASSIGNMENTS BY SUBJECT MATTER

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To the degree possible, Mentors should be organized in schools to cover four subject groupings as follows:

- Natural Sciences (e.g., Physics, Chemistry, Biology, Earth Science)
- Mathematics
- Languages (e.g., Khmer, English)



- Social Sciences (History, Geography, Morals)

When a subject is not directly covered by the assigned mentors, teachers can use the *Observic* software to find the support they need.

## 7 EVALUATING THE WORKLOAD OF MENTORS

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### 7.1 FREQUENCY OF CLASSROOM OBSERVATIONS

New teachers will be observed/conferenced at a rate of around once a week.

More experienced teachers should be observed at a rate of about once a month, as part of their continuous professional development. Sharing one's experience should become part of a new culture in the schools where mentors work.

### 7.2 DURATION OF AN OBSERVATION

A typical classroom observation should include preparation time, a pre-conference with the teacher to determine the areas of need where the teacher requires assistance followed by the observation itself, and a post-conference for feedback. The observation process should take between 1.5 to 3 hours each time. As a general rule, it is recommended that a Mentor should limit observations to various teachers to not more than 3 per day.

### 7.3 REQUIRED TIME FOR ADDITIONAL TASKS

A reasonable amount of time should be reserved in the Mentors' timetable for additional tasks (e.g., workshops, reporting, exposure visits, etc.) and for emergencies.

## 8 POSITION OF THE MENTOR IN THE SCHOOL HIERARCHY

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### 8.1 SENIORITY

The Mentor will occupy a place of some seniority in the school hierarchy that will be equivalent to Vice School Director

### 8.2 NON-THREATENING POSITION

The work of a Mentor relies on trust. As a consequence, Mentors should not be seen as judges or supervisors by the teachers they are meant to support. Nevertheless, Mentors still need to be conferred with the authority and autonomy necessary to do their job effectively. A Mentor should be able to request reasonable tasks of a teacher, as a condition for the support he/she is providing. Such tasks may include simple research, lesson planning, completion of career planning documents, and other normal preparation of lessons. If a teacher refuses to perform these tasks, the technical support to the teacher may be cancelled.

### 8.3 RELATIONSHIP BETWEEN THE TECHNICAL GROUP LEADER AND THE MENTOR

School-based Mentors are not intended to replace TGLs, rather their role is to supplement the regular duties of the TGL. The TGL may give assistance to Mentors who are working with teachers who teach subjects in which the Mentor has not knowledge of the subject matter. The Mentor may also invite the TGL to help with team teaching and other professional development activities for new teachers.

### 8.4 RELATIONSHIP BETWEEN THE SCHOOL DIRECTOR AND THE MENTOR

For Teacher Training Institutions, such as NIE and TEC, please see the dedicated section.

#### 8.4.1 Requesting Specific Tasks

Mentors act as pedagogical advisers at school level. The school director may request Mentors to perform various tasks related to school management, as long as those tasks do not interfere with their main duties. Such tasks may include the following:

- Administrative tasks (short and temporary tasks)
- Participation in discussions about school development planning or special school events
- Training workshops for teachers
- Other educational tasks.

#### 8.4.2 Mentoring a Teacher who is Struggling with the Execution of His/Her Job Duties (e.g. with classroom management or academic content)

Occasionally, a school director can request a mentor to visit a teacher who is struggling with the execution of his or her duties. The initial visit should take the form of an individualized conference with the teacher with the possibility of follow-up observations or team teaching. This should be done with as much tact as possible.

No official report should be done after this mandatory conference, though the Mentor may give an informal assessment and recommendations to the School Director. **If the school principal must visit the teacher's class to make a decision about his/her career, the director should do so him/herself.** As noted above, it should be remembered that Mentoring is based on trust, which is why it is important that the Mentor not be seen by teachers as a 'supervisor' or an 'inspector.' The school director will not interfere in the relationship between the Mentor and the Mentee. However, if a teacher refuses to be mentored or refuses to take the advice provided into consideration, disciplinary action may be taken by the school director.

#### 8.4.3 Reporting

The observation reports produced by Mentors are strictly confidential. They are written for the Mentee him/herself. Neither the school director nor other teachers should have access to these reports without the agreement of the teacher in question. When the Mentor assesses the Mentee's work, such assessments should be used for formative purposes only and not for considerations of promotion or demotion. The Mentor can advise the Mentee to request a more complete evaluation, if he/she thinks that it might help the teacher's professional development. This evaluation should be conducted by someone else. Once again, Mentors should NOT be seen as an Inspector.

Of course, for practical reasons and for the transparency of the process, Mentors should provide reports about their schedules with teachers and the degree to which teachers

comply with such schedules. However, the content of the observations and conferences should remain confidential to preserve the trust between the Mentors and their protégés.

#### 8.4.4 Observation of Immoral and/or Illegal Activities

If a Mentor observes immoral behavior, he/she has to make a difficult decision that may supersede issues of trust between the Mentee and the Mentor.

If the behavior poses an immediate threat to the safety or the moral well-being of one or more students (e.g., drunkenness in the classroom, corporal punishment, or sexual harassment), the Mentor must report it at once.

Serious non-urgent professional misbehaviors, such as taking illegal fees or coming to school late, must also be reported after a reasonable warning (a few days or weeks), if there is no improvement. The probationary time for such warnings to be heeded may be reduced to nothing, depending of the policy of the school. For instance, the ban on illegal fees is a very important rule in the New Generation School program, which teachers are well aware of from the day that they sign their contract with the school. Thus, there may be some variation in the response of the Mentor to various situations depending on the school context and relevant policies.

**Genuine mistakes in pedagogical practice should not be considered to be bad behavior, as per the other examples provided above. Rather, such mistakes should be seen as learning opportunities.**

In any case, it is the responsibility of the school director (not the Mentor) to enforce any disciplinary actions with regards to a teacher's misbehavior.

The principles explained in this section should be explained orally to the Mentee on the first day of his/her entry into a mentoring program.

#### 8.4.5 Duties of the School Director with regards to the Mentor and Mentees

The role of the school director should be to actively facilitate the work of the Mentor. This facilitation may take various forms such as organizing timetables for observations and conferences, providing an appropriate meeting space for private conferences, providing equipment for classroom observations (e.g., tripods, video cameras, etc.), providing advice and feedback about questions asked by the Mentor, and other assistance.

## 9 FINANCIAL INCENTIVES

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Mentors should receive special remuneration from the school, in order to:

- Recognize their expertise and special training
- Retain Mentors at the School
- Ensure the credibility of the career development program
- Confirm their status as having a superordinate role vis a vis other teachers

Within the NGS System, such special remuneration is fixed at 300,000 CR per month. In other contexts and projects, this remuneration may be negotiated depending on the available resources.

## **10 SCHOLARSHIP CONDITIONS AND REFUND POLICY**

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A Mentor graduating from the New Generation Pedagogical Research Center will be expected to work as a government staff for a minimum of 6 years including at least 3 years as a Mentor, in compensation for the scholarship support provided by MoEYS for free study. In case a mentor quits the public system, such individuals may be required to reimburse the scholarship fee to the Center. The amount of this refund is variable but may be ascertained from the following link: [link].

A contract outlining the above conditions of scholarship support will be signed by every trainee who enrolled at the NGPRC with scholarship support.

## **11 MENTORS ASSIGNED TO TEACHER TRAINING INSTITUTIONS (NIE, TEC) AND OTHER OFFICES**

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### **11.1 DUTIES OF THE DIRECTOR**

The directors of teacher training institutions and other government offices provide the mentors with all the information needed to accomplish their mission. This includes:

- Job description of all instructors and other staff
- Pedagogical and administrative policy of the institution or office
- Relevant Regulations regarding teacher oversight.

The Director should also facilitate the relationship between the Mentor and the rest of the staff, by:

- Organizing orientation workshops for relevant staff about the role and responsibilities of the Mentor. NGPRC will provide relevant materials for such presentations.
- Organizing a tour around the institution/office and introducing the Mentor to all personnel.
- Providing facilities necessary to the mentor's mission (e.g., desk, computer, meeting room, etc.)

### **11.2 ROLE OF MENTORS IN TEACHER TRAINING INSTITUTIONS AND OTHER OFFICES**

#### **11.2.1 Activities of Mentors Working at Training Institutions**

Mentors will be assigned to the Pedagogy Department of the institutions where they are posted, but will receive authority to conduct classroom visits across all other departments. Mentors posted to training institutions will participate in planning the implementation of Practicums for teacher candidates enrolled at their respective institutions to ensure that there is adequate support feedback during the Practicum experience.

Mentors posted to training institutions may also provide specialized courses to both Instructors and Teacher Candidates about Continuous Professional Development and how teachers can ensure that their classroom practice follows a growth mindset.

Mentors will make links between the departments at the institutions/offices where they are posted and contribute to creating a professional learning community using social media, shared video archives, and other PLC mechanisms.

Mentors may conduct anonymous surveys among students and lecturers, in order to evaluate the needs of all stakeholders.

Mentors will advise the Director of the TEC about the organization of the practicum.

#### **11.2.2 Activities of Mentors Posted at Provincial or District Offices of Education**

Mentors posted at Provincial or District Level Offices will design programs to promote teacher development. Such programs may be targeted at certain groups of schools or across all schools to meet specific needs (e.g., recently posted teachers fresh out of a training center). Teacher Development Programs may have the following elements:

- Professional support for new teachers graduating from local training institutions.
- Outreach to School Directors who wish to upgrade the quality of teaching at their school.
- Organizing specialized courses or workshops on specific methodologies that promote student learning
- Organizing exposure visits for teachers in specific schools
- Organizing on-going school-based support systems in local schools
- Other

#### **11.3 POSITION AND SALARY IN TEACHER TRAINING INSTITUTIONS**

Mentors receive a salary compatible with their hierarchical position in the assigned institution. The position of a Mentor is similar to a Senior Instructor or Office Head (e.g., Head of the Academic Office) and will be remunerated at a similar level of payment.

## **12 ASSESSING THE MENTORING PROGRAM**

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NGPRC will conduct longitudinal research about the effectiveness of Mentors. This research will provide a scientific basis to revise the current policy framework as well as all relevant curriculum documents.