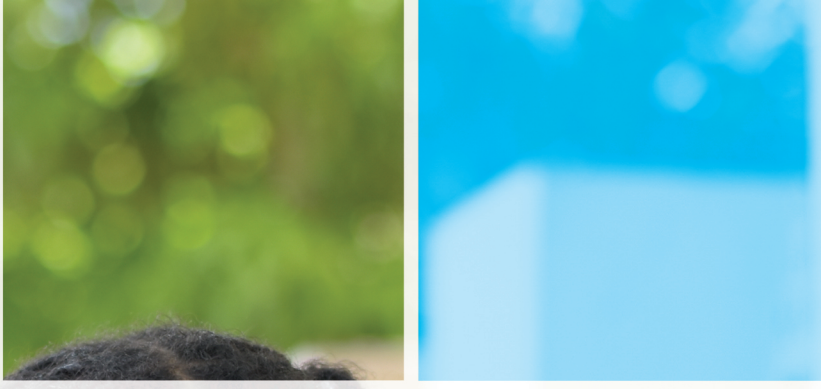
NATIONAL COUNCIL ON EDUCATION

MODELLING OPTIONS FOR THE JAMAICAN SCHOOL SYSTEM:



A RESPONSE TO THE COVID-19 PANDEMIC

Facilitating Enabling Environments to Support Student Continued Learning

Modelling Options for the Jamaican School System in Response to the COVID-19 Pandemic

Introduction

Schools across Jamaica are currently preparing to restart the new school year, and without exception, the **new normal** must be the guiding principle for how learning and teaching is conducted within a COVID-19 environment. With no vaccine or cure for the coronavirus yet identified, school leaders must be prepared to ensure that those who come to do business at their locations are protected at all stages of their stay. The purpose of this document is to provide schools with appropriate modelling options which can be implemented to ensure a safe environment. Therefore, a modelling option could be considered a redesign or adaptation of the school facilities and general practices based on key features such as school type, ownership, space availability, location, size of operation, and physical and human resources. The modelling options were developed in response to the COVID-19 protocols.

With the lifting of the virtual shutdown of the country and the gradual reopening of businesses and government entities, schools must adhere to the basic protocols of physical distancing; the wearing of multilayered masks; regular handwashing; and the sanitising of furniture, equipment, and buildings. These are four of the most critical actions that must be observed by all schools to ensure the highest level of protection at this time. The deployment of resources to carry out testing, treating, and contact tracing, specifically for the school system, is a vital step that must also be taken. The aim is to ensure that schools are optimally prepared for reopening in order to continue the education process, with safety being the hallmark of operations.

There are approximately 530,000 children and students, along with thousands of teachers and other employees, engaged in learning and teaching and the daily operations of schools across the education sector; therefore, the prospect of a 'super-spreader event' is a real possibility. It can take only a single individual to pass on the virus in a school setting where large numbers of persons are assembled. It is incumbent on the State, private entities, and voluntary organisations to be prepared to assist schools if there is a further outbreak of the coronavirus.

Basic Assumptions for the Effective Deployment of Modelling Options

The National Council on Education, the organisation with overall responsibility to provide policy advice for the school system, has explored some modelling options to either increase space availability or reduce the number of persons on the school compound at any one time. The likelihood of any of the modelling options working effectively will depend on the following assumptions:

1. The knowledge acquired regarding COVID-19 is sufficient for schools to implement measures which will protect the health and safety of the school population and others who must access these compounds.
2. The Ministry of Education, Youth and Information will provide additional funding and resources to facilitate the new initiatives in order for schools to function effectively.
3. Continuous training and orientation will be done to prepare school constituents to function in a COVID-19 pandemic environment.
4. There is a commitment by the members of the school community to rigorously adhere to the protocols stipulated for safe behaviour.
5. The State and other entities are prepared to carry out testing, treating, and contact tracing if there is an outbreak of the coronavirus in the school system.

Enabling Measures to Manage the Return to School

The enabling measures being presented, while based on knowledge gleaned locally and from the publications of the international community, including the United Nations and the Centres for Disease Control, every precaution must be taken to ensure that all information is properly scrutinised. With more studies constantly being done on the coronavirus, new knowledge is replacing earlier held positions related to the virus.

Number of Students on School Compound

It would be prudent to limit the number of students being accommodated on the school compound at any one time, especially during the first few months of reopening. The basic concern is that the larger the number of students congregating in a single location, the greater the chance for the virus to be transmitted. To minimise this possibility, schools should ensure that only a percentage of the student population is present on the school compound at any one time. For example, schools with more than 1,800 students should only schedule between 800 and 1,000 students at a given time. The number selected will depend on the space available at the location. Schools with expansive compounds may be able to accommodate 1,000 students. Schools with less space available should seek to accommodate the lesser number of 800 students. Schools with populations between 1,400 and 1,700 students should accommodate between 700 and 850 students. Those with populations between 1,000 and 1,300 students should accommodate between 500 and 650 students, and populations between 600 and 900 students should accommodate from 450 to 700 students. Schools with fewer than 600 students should seek to manage the population in accordance with the prescribed protocols.

Congregating on the School Compound

The congregating of students before and after school and during break time must be addressed. Those leaving school must be picked up immediately after exiting their classes. Ideally, transportation should be waiting for the students and not the reverse. It is better that they remain in their classrooms while awaiting transportation than assembling outside in large groups. The gathering of students should be avoided at all times.

Gradual Return to School

The return to school for the new school year MUST be a gradual process. This can be achieved by having students returning by grade level (especially in the lower grades), departments, blocks, and sex over a period of at least two weeks. The main purpose of this approach is to minimise the number of students on the compound, especially during the early restart of school. This approach will place the school in a better position to make adjustments before the return of all students. Further, this will also allow schools to better respond to any possible outbreak of COVID-19, with a reduced number of students present during the early stages of reopening.

Age Makes a Difference

The age of students seems to make a difference to their ability to resist the worst impact of the virus. The United Nations (2020) report entitled 'The Impact of COVID-19 on Children' states: "Children have been largely spared from the severe symptomatic reactions more common among older people, [and those affected are more] the exceptions and are likely related to prior conditions." A large-scale study of children in South Korea, published in July 2020, revealed that "children younger than 10 [years] transmit to others much less often than adults do, but the risk is not zero. And those between the ages of 10 and 19 can spread the virus at least as well as adults do". These findings suggest that it is safer for younger children to return to the school compound because they are less likely to transmit the virus among themselves. However, some secondary schools are making plans for older students to be at school for a greater proportion of the time. The main reason for promoting this approach is that older students are the ones who will be preparing for regional and national examinations, hence the need for them to be in school for longer periods. This approach goes against what some studies have revealed. As such, decision-makers cannot only consider what is prudent for education, but also what is safest for our children's return to school.

Super-spreader Event

While the younger ones are less likely to transmit the virus, it must be borne in mind that they are still capable of doing so. This could result in a "super-spreader event" if children from multigenerational families or crowded households contract the virus and return to their homes infected. In this scenario, older children 11 to 18 or 19 years old are more likely to be transmitters of the virus in the same way as adults. Thus, children who go to school and encounter hundreds of other children who are ideal candidates for transmitting the virus may take it back to their homes. The most vulnerable of the multigenerational families would be the grandparents and those with underlying conditions.

These measures will not be readily adhered to by school constituents; therefore, a concerted education and awareness programme must be implemented to ensure that students, parents, and the rest of the school community embrace these ideas.

Modelling Option 1: Alternate-Day Attendance - Face to Face and Online

This is a blended modelling option with up to 50 percent of the students attending school on alternate days while the other 50 percent of the students are involved in remote learning at home or at locations outside of the school setting. To ensure that the students have the same amount of learning time for face-to-face as remote by online learning, the school week will be extended from five to six days. This will allow each student to spend three days learning remotely and three days face to face. The six-day-week schedule will continue until the end of each semester. This modelling option is intended for large schools located in rural or urban areas.

MODELLING OPTION 1: ALTERNATE-DAY ATTENDANCE - FACE TO FACE AND ONLINE							
Main Features (Face to Face)	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 1 seeks to establish a balance between face-to-face and remote learning, at the same time, creating space for effective physical distancing.	**Existing Space:** This would be a large school with over 1,300 students and limited space to be converted into classrooms. In addition, there are no buildings available nearby that can be used as classrooms. Consequently, the space available or the existing space will not allow for the implementation of the physical-distancing protocol.	**Rural:** Fewer students will be transported per day because up to 50 percent of the students will be learning remotely or from home, and 50 percent will be face to face. **Urban:** The same situation will obtain for schools that are located in urban areas.	**Teaching Staff:** Maintain same level of academic staff **Administrative Staff:** Maintain same level of administrative staff **Ancillary Staff:** Additional ancillary staff is required to carry out the additional cleaning and sanitising of classrooms and workspaces.	Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards. Washbasins and hand sanitisers must be located at strategic points for easy access. Because fewer students will be on the school compound each day, there would be no need for additional furniture.	**Duration:** Six-day school week Start time: 7:30 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch:1 hour In-class breaks:10 minutes **Meals:** Breakfast and lunch	**Advantages:** Less dislocation The school population is reduced by 50 percent each day. **Limitation:** Large numbers of students are still attending school.	**Equipment:** Equipment for handwashing and cleansing solutions. Teaching equipment **Human Resource Support:** Ancillary workers

Modelling Option 1: Alternate-Day Attendance- Face to Face and Online (Cont'd)

MODELLING OPTION 1: ALTERNATE-DAY ATTENDANCE - FACE TO FACE AND ONLINE (CONT'D)							
Main Features (Face to Face)	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
	Modified Space: With the introduction of a blended modelling option on a rotational basis, up to 50 percent of the space will be freed up for face-to-face learning and teaching as half of the student population will participate in remote learning while at home or other designated locations. **Impact:** The school will be better able to provide face-to-face classes and adhere to the physical-distancing protocol.	**Impact:** Schools that provide their own transportation as well as private providers will be transporting fewer students per day. This would mean a reduction in revenue for the providers of transportation. With fewer students being transported to and from school, there will be fewer students congregating at drop-off and loading points. **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**		Online equipment to facilitate blended teaching at school may be required for some schools.			

Modelling Option 1: Alternate-Day Attendance - Face to Face and Online (Cont'd)

MODELLING OPTION 1: ALTERNATE-DAY ATTENDANCE - FACE TO FACE AND ONLINE (CONT'D)							
Main Features (Online)	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Students will study from home or other approved locations. Lessons will be delivered synchronously or asynchronously.	**Existing Space:** Students will give up space at school and remain at home or at a designated location three days per week or as determined. **Modified Space:** With 50 percent of the students learning from home, those who are at school will have more space to support the physical-distancing protocol. **Impact:** Home support is required from parents and/or guardians. If the students are engaged in remote learning outside of the home setting, parents would not be required to provide supervision.	**Rural:** Limited or no transportation will be required for the students who are learning remotely or from home unless the students learning remotely have to be transported to a facility such as the library or a location other than their own homes. **Urban:** The same situation will obtain for schools that are located in urban areas. **Impact:** With students mainly learning from home or remotely, the gathering of students in one location will be avoided. Also, the problems arising from transporting students to and from school would be eliminated. **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Teaching Staff:** Maintain same level of academic staff **Administrative Staff:** Maintain same level of administrative staff **Ancillary Staff**: Maintain same level of ancillary staff	Students who are learning from home must be provided with a dedicated space with a chair and desk or table. The space should be comfortable, and all distractions such as television, should be removed. Hand sanitisers and facilities for the washing of hands must be provided if learning and teaching is being conducted away from home. Students learning from home or other locations will need reliable, personal learning devices, data access, and online services.	**Duration:** Six-day school week Start time**:** 7:30 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch:1 hour In-class breaks: 10 minutes **Meals:** Breakfast and lunch	**Advantages:** There is limited exposure to the virus due to less contact among students. Travelling to and from school is reduced. Those students who are better at auditory learning will be at an advantage. **Limitation:** Reduced access to teachers	**Teaching support:** Devices to facilitate teaching and learning **Meals:** For some students, there is a cost to parents for providing lunch, and in some cases, for providing breakfast.

Modelling Option 2: Programme and Subject Type Emphasised - Face to Face and Online

This is also a blended or hybrid approach that is a modification of 'Modelling Option 1: Alternate-Day Attendance – Face to Face and Online'. It is recognised that for some programmes and specific subjects, there is a definite advantage in conducting learning and teaching in the school environment. The facilities to support learning and teaching, including laboratories and workshops, are located on the school compound. The upgraded secondary and technical schools with extensive Technical Vocational Education and Training (TVET) programmes would be best suited for this model. Based on a well-integrated teaching schedule, non-technical subjects would be taught remotely, thereby reducing the number of students on the school compound at any one time by 25 to 50 percent. As such, attendance numbers will vary between school and home. This modelling option is intended for large schools but could be adopted by schools with small student populations.

MODELLING OPTION 2: PROGRAMME AND SUBJECT TYPE EMPHASISED - FACE TO FACE AND ONLINE							
Main Features (Face to Face)	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 2 emphasises face-to-face skills-based learning and teaching activities. Also, subjects that have strong practical features will be facilitated, for example, Technical, Vocational, Education and Training (TVET) subjects and Physical Education.	**Existing Space:** With a strong emphasis on technical or TVET programmes, much of the teaching is expected to be done face to face at workshops and in laboratories; however, there is little flexibility with workshops, and some laboratories have fixed equipment and machines in place. The non-technical courses are also taught face to face at school or on the compound.	**Rural:** Fewer students to be transported per day Transportation needed twice per day Late transportation to be arranged	**Teaching Staff:** The teaching staff complement may need to be increased to facilitate the teaching of practical subjects both online and face to face. **Administrative Staff:** Maintain same level of administrative staff **Ancillary Staff:** Maintain same level of ancillary staff	Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards. Washbasins and hand sanitisers must be located at strategic points for easy access. .	**Duration:** Start time: 7:30 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes	**Advantages:** The school can focus its efforts on the delivery of hands-on or practical-skills training at the programme and subject level. TVET programmes are being highlighted in this modelling option.	**Teaching Support:** Additional teaching and support staff Devices to facilitate teaching and learning **Meals:** Cost to parents for meals that would normally be served at school

Modelling Option 2: Programme and Subject Type Emphasised - Face to Face and Online (Cont'd)

MODELLING OPTION 2: PROGRAMME AND SUBJECT TYPE EMPHASISED - FACE TO FACE AND ONLINE (CONT'D)							
Main Features (Face to Face)	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Science practical Music practice Co-curricular activities Students needing special teaching intervention	**Modified Space:** With the support subjects such as English and Mathematics being taught online, between 25 percent and 50 percent space will be freed up to accommodate the vocational and other practical-based subjects and labs. Non-lab activities that do not require students to use machines and other equipment can be taught in the space that was normally used for teaching non-technical subjects. **Impact:** With the non-technical courses being taught online, and with more space being made available for those doing workshop activities, the physical-distancing protocol can be realised.	**Urban:** Fewer students to be transported per day Transportation needed twice per day Late transportation to be arranged by the school **Impact:** Fewer students travelling to and from school each day Fewer students will be congregating at drop-off and loading points at the school. Students spending more time at school **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**			**Breaks:** Lunch:1 hour In-class breaks:10 minutes **Meals:** Breakfast and lunch	**Advantage:** School population reduced by up to 50 percent each day **Limitation:** The same instructors could be teaching the theoretical classes to students while they are at home and the hands-on classes while they are at school.	

Modelling Option 2: Programme and Subject Type Emphasised - Face to Face and Online (Cont'd)

MODELLING OPTION 2: PROGRAMME AND SUBJECT TYPE EMPHASISED-FACE TO FACE AND ONLINE (CONT'D)							
Main Features (Online)	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
The online component will facilitate the non-practical courses such as English and Mathematics as well as the theoretical component of the practical subjects.	**Existing Space:** Students will give up space at school and remain at home or at a designated location three days per week or as determined. **Modified Space:** With between 25 and 50 percent of the space freed up because the non-practical courses and the theory component of the practical courses will be delivered outside of the face-to-face or school setting, the protocol for physical distancing will be observed. **Impact:** Parents and or guardians will have to provide the required support for student(s), if teaching and learning is being done from home instead of locations outside of the home.	**Rural:** Fewer children will be travelling to school, thus reducing the need for the same level of transportation. **Urban:** Students usually travel by public transportation that is not coordinated by the school. **Impact:** Revenues to the transportation sector, particularly small-taxi and mini-bus operators, will be reduced, especially if transportation is arranged by the school. **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Teaching Staff:** There may be the need to engage or train additional staff to deliver online courses. **Administrative Staff:** Maintain same level of administrative staff **Ancillary Staff:** There may be the need to engage additional ancillary staff.	Students who are learning from home must be provided with a dedicated space with a chair and desk or table. The space should be comfortable, and all distractions, such as television, should be removed. Hand sanitisers and facilities for the washing of hands must be provided if learning and teaching is being conducted away from home. Students learning from home or other locations will need reliable, personal learning devices, data access, and online services.	**Duration:** Start time: 7:30 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch:1 hour In-class break:10 minutes **Meals:** Breakfast and lunch	**Advantages:** Students will have fewer encounters with large numbers of students. Those students who are better at auditory learning will be at an advantage. Reduced travelling to and from school Reduction in transportation cost **Limitations:** Students may need greater instructional support. The transition from home to school could be unsettling for some students. Greater burden on parents and guardians to manage children while studying at home	**Human Resource Support:** Additional academic and non-academic staff required **IT Support Services:** Internet service **Equipment:** Equipment for handwashing and cleansing solutions Teaching equipment

Modelling Option 3: Shift System – [Same-Day-Attendance] Face to Face

The shift system will be a return to the modelling option that is being phased out by the Ministry of Education, Youth and Information. This modelling option will be useful, in the context of COVID-19, to allow for physical distancing. Two separate schools will be in operation each day over an extended period. The modelling option is intended for large schools, but schools with small populations could also adopt this option. The main challenges will include students on the morning shift having to start early, with those on the afternoon shift reaching home late. Additionally, not enough time is available to deliver a full-day curriculum. For schools already on shift, greater effort must be made to secure more space and facilities. In the case of those going on shift for the first time, the needs may not be as demanding as for those that are already on shift. The further doubling of the shift system could significantly increase the need for more staff and space, including holding areas. Also, co-curricular activities could be curtailed or disrupted because of reduced space and time.

MODELLING OPTION 3: SHIFT SYSTEM - [SAME-DAY-ATTENDANCE] Face to Face							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 3 represents schools which are adopting the shift system for the first time. These schools will operate within a whole-day frame by having two schools in a single day. This will reduce the number of students for each school and provide more space in order to adhere to the physical-distancing protocol.	**Existing Space:** Schools that will be using the shift system for the first time will be able to accommodate the existing population of students because two schools will be created, with extended time given to maximise learning and teaching time. **Modified Space:** No additional space will be required because the school will apply extended hours and have two sets of students attending at separate times.	**Rural:** Transportation is required to and from school four times per day. This will have to be arranged by the school especially if it is located outside of the main town centre. **Urban:** Transportation is required to and from school four times per day. However, the school may depend on private providers, especially if it is located in close proximity to a main town centre.	**Teaching Staff**: There will be the need to increase the academic staff complement when the single shift is doubled. Some teachers may be asked to teach on both shifts. **Administrative Staff:** There may be no need for additional administrative staff because the workload is not likely to increase appreciably **Ancillary Staff:** Additional ancillary staff will be required to carry out extensive cleaning and sanitising of the workspace.	Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards. Schools adopting the shift system for the first time will need little or no additional equipment and furniture because the shifts will be operating during separate time periods: 7:00 a.m. to 11:45 a.m. and 12:15 p.m. to 5:00 p.m.	**Shift 1:** **Duration:** Start time: 7:00 a.m. End time: 11:45 a.m. **Breaks:** Midmorning and midafternoon: 20 minutes In-class breaks:10 minutes **Shift 2:** **Duration:** Start time: 12:15 p.m. End time: 5:00 p.m. **Breaks:** Midmorning: 20 minutes Lunch:1 hour Midafternoon: 20 minutes In-class breaks:10 minutes	**Advantages:** Teaching is less likely to be affected by the lack of electronic devices. Both students and teachers who prefer face-to-face learning and teaching will be satisfied with this modelling option.	**Human Resource Support:** Additional academic ancillary and administrative staff Remuneration for staff exceeding standard working hours

Modelling Option 3: Shift System – [Same-Day-Attendance] Face to Face (Cont'd)

MODELLING OPTION 3: SHIFT SYSTEM – [SAME-DAY-ATTENDANCE] Face to Face (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 3 represents schools which are already on the shift system. Schools already on the shift system will have to operate within a whole-day frame, but they will have to secure additional classroom space. There may be need for some staggered attendance in order to create space for physical distancing. Further, the introduction of online teaching may be the best option if additional space cannot be located.	**Existing Space:** Existing shift schools will have little or no space to facilitate the physical distancing protocol. As such, they will need to apply some form of staggered system to double or even quadruple the required space. **Modified Space:** In order to implement the physical-distancing protocol, schools already on shift will need additional space such as auditoriums, holding areas, rented space, tents, and private buildings. If schools are not able to secure the additional space, the best alternative would be to introduce an online component, which would reduce the need for face-to-face space.	**Rural:** Transportation may be required to and from school more than four times per day. This will have to be arranged by the school especially if it is located outside of the main town centre. **Urban:** Transportation may be required to and from school more than four times per day. However, the school may depend on private providers, especially if it is located in close proximity to a main town centre.	**Teaching Staff:** For schools that are already operating on double shift, the academic staff complement will have to be substantially increased for each of the shifts. **Administrative Staff** Additional staff may be required to support the school which is already on shift. **Ancillary Staff:** Additional ancillary staff will be required to carry out extensive cleaning and sanitising of the workspace	For schools that are already on shift, additional equipment and furniture will be required, especially for the new space that they will have to acquire.	**Shift 1** **Duration:** Start time: 7:00 a.m. End time: 11:45 a.m. **Breaks:** Midmorning and midafternoon: 20 minutes In-class breaks:10 minutes **Shift 2:** **Duration:** Start time: 12:15 p.m. End time: 5:00 p.m. **Breaks:** Midmorning: 20 minutes	**Disadvantages:** Students on the late shift will have less time to rest and complete assignments at home. Extracurricular activities are curtailed as less time will be available.	Tents Rental of space Additional furniture Transportation

Modelling Option 3: Shift System – [Same-Day-Attendance] Face to Face (Cont'd)

MODELLING OPTION 3: SHIFT SYSTEM - [SAME-DAY-ATTENDANCE] Face to Face (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
New and existing double-shift system.	**Impact:** The school will be heavily used, thus increasing the need for a proper maintenance system and regular cleaning of the facilities.	**Impact:** Special arrangement must be made with private providers to have dedicated transportation service because of the frequency at which students will be transported to and from school. Schools which are able to afford the cost may have to provide its own transportation **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Administrative Staff:** Additional administrative staff will be required to support both shifts and more so for schools already on shift. **Ancillary Staff:** Additional ancillary staff will be required to carry out extensive cleaning and sanitising of the workspace.		**Scheduling for Shift 2 (cont'd)** Lunch:1 hour Midafternoon: 20 minutes In-class breaks:10 minutes **Meals:** Breakfast and lunch Snack before dismissal	**Disadvantages:** Students on the late shift will have less time to rest and complete assignments at home. Extracurricular activities are curtailed. Less time is available for teaching and learning. There is a greater chance that students and the school community would contract the coronavirus.	

Modelling Option 4: Extended Capacity - Face to Face

When the available space does not allow for physical distancing, schools must either create the space or secure space that is owned by other entities. Creating space could mean using assembly halls, holding areas, the outdoors, tents, and underutilised rooms. Additionally, space owned by churches, the community, and even private citizens could be rented or borrowed in the interim. This modelling option may be suited for a small school and where there is need for additional classroom space to satisfy the physical-distancing requirements. Extended capacity would allow all students to attend school five days a week. This modelling option is appropriate for small schools.

MODELLING OPTION 4: EXTENDED CAPACITY– FACE TO FACE							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Require-ments**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 4 is suited for a school with limited classroom space and which is unable to acquire additional space in the near future. As such, existing space that can facilitate learning and teaching will be secured by the school to function within the prescribed protocol for COVID-19.	**Existing Space:** The existing space is inadequate, or there is limited utilisation of existing space. Further, there is little additional built space to be accessed on the school compound. **Modified Space:** Space to be sourced includes church halls, unused buildings, tents, outdoors, and space available in neighbouring schools.	**Rural:** Same number of students will be transported per day **Urban:** Same number of students will be transported per day **Impact:** Limited impact on transportation **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Academic Staff:** Because the facilities may be dispersed beyond the existing school compound, and some classes may be divided to reduce numbers, additional teaching staff will be required. **Administrative Staff:** There may be limited need for additional administrative staff. **Ancillary Staff:** Additional ancillary staff will be required as a result of the extensive cleaning and sanitising that will be needed.	Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards. Additional furniture will be needed for the classroom space created with the provision of tents, assembly halls, outdoors, etc. It would also mean that additional learning and teaching equipment such as multimedia and smart boards will be required for the new learning space. Washbasins and hand sanitisers must be located at strategic points for easy access.	**Duration:** Start time: 7:00 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch: 1 hour In-class breaks: 10 minutes **Meals:** Breakfast and lunch	**Advantages:** Students will have more space available to them, which is in keeping with the open environment conducive to containing the contagion. Students whose parents are unable to accommodate them at home will be facilitated at school under this modelling option. **Disadvantages:** Students and teachers will continue with traditional learning and teaching approaches. Learning may be limited due to insufficient devices, such as laptops, to satisfy the dispersed learning environment.	**Human Resource Support:** Extra teaching and ancillary staff **Furniture**: Additional furniture and equipment Transportation

Modelling Option 5: Added School Day – Saturday or Sunday

Many Asian countries, including Japan, have school for six days instead of five days a week as obtains in countries such as England, Canada, and Jamaica. With the challenges of limited space to enforce physical distancing, some schools could adopt teaching smaller classes over a longer period to include Saturdays or Sundays or both. This modelling option would allow large classes to be divided into smaller ones. The selection of the day(s) for extending the school week will give due consideration to the religious orientation of teachers and students. This modelling option would be appropriate for church schools, and the extended day selected would be based on the denomination and the worship day. This modelling option would be appropriate for small schools located in rural or urban areas.

MODELLING OPTION 5: ADDED SCHOOL DAY – SATURDAY OR SUNDAY							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 5 features a six-day school week, which will assist in reducing class size and extending teaching time without needing to create additional space in the immediate future.	**Existing Space:** The school is unable to create additional space because of the physical location of the building, or there is need for a new building, which would discourage spending for renovation and upgrade of the existing facilities. The implication for the reopening of school is that the school will be unable to observe the physical-distancing protocol.	**Rural:** Transportation on Sundays will be problematic for the rural areas. Hired transportation may be necessary. **Urban:** Transportation will be more available, but still problematic, on Sundays in the urban areas. **Impact:** It may be more expensive to travel on Sundays, and the availability of public transportation cannot be guaranteed. **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Academic Staff:** Additional academic staff may be required to teach on day six. **Administrative Staff:** Administrative staff may be required to be employed on a six-day work week arrangement. **Ancillary Staff:** Additional ancillary staff will be required for day six.	Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards. Additional furniture may be needed to facilitate a smaller class size. Washbasins and hand sanitisers must be located at strategic points for easy access.	**Duration:** Start time**:** 7:00 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch**:** 1 hour In-class breaks: 10 minutes **Meals:** Breakfast and lunch	**Advantage:** There is no need to create additional space. **Disadvantage:** Saturdays and Sundays are usually days of worship. This arrangement would be of concern for some persons.	**Human Resource Support:** Additional academic and ancillary staff required **Equipment** Equipment for handwashing Cleansing solutions Transportation

Modelling Option 5: Added School Day – Saturday or Sunday (Cont'd)

MODELLING OPTION 5: ADDED SCHOOL DAY--SATURDAY OR SUNDAY (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
	Modified Space: The extension of the school week from five to six days will allow the school to schedule classes over six to seven hours each week while reducing class size. **Impact:** The addition of an extra day will allow the school to reduce class size, and the physical-distancing protocol can be implemented in accordance with stipulated standards.						

Modelling Option 6: Added Hours Plus Summer - Face to Face

Schools will seek to add up to two hours to the school day. In addition, schooling will continue until the end of July. This arrangement would allow up to 10 hours each week and an additional 22 days to the school year. The additional time would facilitate smaller classes and reduce the number of students on the school compound at any given time. The modelling option would require additional teachers because larger classes would have to be divided to facilitate smaller class sizes. This modelling option would be appropriate for small schools in rural or urban areas.

MODELLING OPTION 6: ADDED HOURS PLUS SUMMER - FACE TO FACE							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Model Option 6 is proposed on the basis that there is consensus that summer has to be included in the learning and teaching time. In addition, with improved access to transportation, students can spend longer hours at school.	**Existing Space:** Space is limited, so the school has to deliver teaching over a longer period. **Modified Space:** Additional space could assist, but there is limited time and resources to create new space. **Impact**: More time will be spent at school.	**Rural:** Students will have to be transported from home to school earlier and from school to home later. **Urban:** Students will have to be transported from home to school earlier and from school to home later. **Impact:** Students are travelling earlier to school and later to home. **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Academic Staff:** Additional academic staff is required for classes that are divided because of large size. Some staff members may be required to teach additional hours. **Administrative Staff:** No need for additional administrative staff **Ancillary staff:** Additional ancillary staff is required because of increased cleaning and sanitising requirements.	Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards. Additional furniture may be needed to facilitate the dividing of larger classes into smaller ones. Washbasins and hand sanitisers must be located at strategic points for easy access. Additional furniture required	**Duration:** Start time: 7:00 a.m. End time**:** 4:00 p.m. Summer: July and part of August if required **Breaks:** Midmorning: 20 minutes Lunch:1 hour Midafternoon: 20 minutes In-class breaks: 10 minutes **Meals:** Breakfast and lunch Snack before dismissal	**Advantages:** Reduced need for extensive online interaction Ideal for primary- and early childhood level schools **Disadvantages:** Summer is usually the time for overseas employment for tertiary and even the senior students at the secondary level. Most students use the summer as the break period. Increased heat during the summer	**Human Resource Support:** Additional academic and ancillary staff required. **Equipment:** Equipment for handwashing. Sanitising solutions Transporta-tion.

Modelling Option 7: Fully Online

Classes will be delivered fully online. This is a modelling option for future schooling or a school where the facilities are inadequate to resume teaching and learning with the reopening of schools. Students will be able to access school virtually from any location, and hands-on or skills-based learning could be arranged with other schools with the available facilities. Also, this modelling option would be appropriate for students with special challenges or for children whose parents may not be comfortable with sending their children back to the traditional classroom/school setting. Such a programme would have to be sanctioned by the Ministry of Education, Youth and Information and regular assessment done by the National Education Inspectorate. Typically, a fully online learning facility would be privately owned and run, but the Ministry of Education, Youth and Information could also be involved in this approach to schooling during the COVID-19 pandemic period.

MODELLING OPTION 7: FULLY ONLINE							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 7 provides for learning and teaching that is fully online unless there are planned sessions to satisfy limited learning needs.	**Existing Space:** Space for learning and teaching at school is not a requirement. **Modified Space:** Space is required for administrative purposes. [Note that a limited number of classrooms will be required for specially planned learning and teaching sessions.]	**Rural:** Not required **Urban:** Not required **Impact:** Regular transportation of students will not be a factor. **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Academic Staff:** The academic staff complement could be comprised mainly of adjunct staff who are also engaged otherwise. **Administrative Staff:** Limited number of administrative staff will be required **Ancillary Staff:** Limited number of ancillary staff will be required	Students who are learning from home must be provided with a dedicated space with a chair and desk or table. The space should be comfortable, and distractions, such as television, should be removed. Limited facilities are required because almost all learning and teaching would be conducted online. Students learning from home or other locations will need reliable, personal learning devices, data access, and online services.	**Duration:** Start time: 7:00 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch:1 hour In-class breaks: 10 minutes **Meals:** Breakfast and lunch	**Advantages:** There will be no need to travel to and from the school compound. There is reduced chance of contracting COVID-19 as students do not have to travel or meet in large groups. **Disadvantages:** Socialisation among students and young people at school will be absent. There will be limited or no face-to-face interaction between teachers and students The quality of Internet service could affect learning and teaching, especially in the rural areas.	Parents will meet the cost for learning devices and Internet service.

Modelling Option 8: Selected Grades and Days Attendance

Attendance is based on grade scheduling. To meet the social-distancing requirements, grades are scheduled for school-based learning and teaching. Attendance may vary, with some grades being required to attend all the days to some attending three days per week. For example, grades 7 and 8 are required to attend three days per week, and for the days they are not at school, learning and teaching is done online, or they would be required to do their schoolwork from home. The priority for attendance will be determined by factors such as the management of the students outside of the school setting and preparation requirements for the grade. Grades 11-13 may need to receive daily attention in preparation for their national and/or regional examinations.

MODELLING OPTION 8: SELECTED GRADES AND DAYS ATTENDANCE							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 8 provides for students whose attendance is based on grade levels and the number of days selected per week. Learning and teaching will be done both online and face to face, for example, grades 7-8 will attend three days per week.	**Existing Space:** The school does not have enough space to reduce class size and facilitate the teaching of all students at the same time. **Modified Space:** With the rescheduling of attendance by days and grade levels, the existing learning space can be timetabled to accommodate fewer students in a classroom.	**Rural:** Fewer students will need transportation because some grades will study from home each school day while others will travel to school. Consigned transportation will transport fewer students under this modelling option. **Urban:** Fewer students will need transportation because some grades will study from home each school day. Consigned transportation will transport fewer students under this modelling option.	**Teaching Staff:** There may be need for additional academic staff, especially for the delivery of online learning and teaching. **Administrative Staff:** Maintain same level of administrative staff	**Learning at Home:** Students who are learning from home must be provided with a dedicated space with a chair and desk or table. The space should be comfortable, and all distractions, such as television, should be removed. Students learning from home or other locations will need reliable, personal learning devices, data access, and online services. **Learning at School:** Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards	**Duration:** Start time: 7:30 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch:1 hour In-class breaks:10 minutes **Meals:** Breakfast and lunch	**Advantages:** Those classes or grades that are considered to be at a critical stage of learning and teaching will be scheduled for more school attendance per week. School will be better able to meet physical-distancing requirements.	**Human Resource Support:** Additional academic and ancillary staff Training of teachers to deliver online teaching and learning **Equipment:** Equipment for handwashing Sanitising solutions Transportation

Modelling Option 8: Selected Grades and Days Attendance (Cont'd)

MODELLING OPTION 8: SELECTED GRADES AND DAYS ATTENDANCE (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Both online and face-to-face learning will be conducted on the school compound.	**Impact:** The existing space can be effectively managed to accommodate face-to-face learning and teaching for targeted classes. For example, grades 11-13 students will have to spend more time at school to facilitate their preparation for external examinations.	**Impact:** This modelling option will reduce the earnings of local transport services, which may discourage them from any consignment agreement. **N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**	**Ancillary Staff:** Additional ancillary staff will be required because of the need for extensive and continuous cleaning and sanitising of facilities.	Washbasins and hand sanitisers must be located at strategic points for easy access. Additional furniture is required as well as the reorganisation of existing facilities to provide new learning areas.		**Advantages:** With fewer students on the compound, there will be reduced risk of contracting and transmitting the coronavirus. The school will be better able to manage the available space. **Limitations:** Students spending less time at school may be at a disadvantage in terms of learning support. Parents and guardians may have challenges managing the days their children are required to engage in home or remote-based learning. The monitoring and supervision of home-based or remote learning may pose difficulties for schools.	

Modelling Option 9: Blended Teaching at School

In this modelling option, classes are divided, and teaching is done both face to face and online at the same time at the school. For this modelling option, the school has been able to secure the space needed on the school compound. Spaces that could be used include auditoriums, tents, and the outdoors, among others. This approach can be both synchronous and blended because some of the students are being taught in real time, using the online modality, and the remainder of the class is being taught face to face.

MODELLING OPTION 9: BLENDED TEACHING AT SCHOOL							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 9 will facilitate both online and face-to-face learning, which are facilitated on the school compound.	**Existing Space:** The school has excess space that can be converted into useable classrooms or learning areas. The school has yard space that can accommodate outdoor classes. **Modified Space:** Existing space needs to be converted into useable classroom space. **Impact:** The school is able to respond to the learning and teaching needs of the students by modifying the available space on the school compound.	**Rural:** Students will not need additional transportation, but the teaching schedule may alter the time students will have to be transported to and from school. **Urban:** Students will not need additional transportation, but the teaching schedule may vary based on start and completion times of classes. **Impact:** There may be earlier start times for delivering students to school and later times for picking them up from school.	**Teaching Staff:** Additional academic staff is required because the emphasis is on in-school online classes. **Administrative Staff:** Maintain same level of administrative staff **Ancillary Staff:** Additional ancillary staff will be required because of the need for extensive and continuous sanitising and cleaning of facilities.	Students who are learning from home must be provided with a dedicated space with a chair and desk or table. The space should be comfortable, and distractions, such as television, should be removed. Learning areas at school are equipped for Internet-based learning and teaching. Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards.	**Duration:** Start time: 7:30 a.m. End time: 2:30 p.m. The school day can be extended as required. **Breaks:** Midmorning: 20 minutes Lunch:1 hour In-class breaks:10 minutes **Meals:** Breakfast and lunch	**Advantages:** Students who do not have the facilities to support home or remote schooling will be accommodated at school. The school will be better able to monitor and supervise learning and teaching. This option would respond to the concern that out-of-school learning limits the socialisation of the children.	**Human Resource Support:** Additional academic and ancillary staff Training of teachers to deliver online teaching **Equipmen**t: Handwashing equipment Sanitising solutions Devices including laptops and tablets

Modelling Option 9: Blended Teaching at School (Cont'd)

MODELLING OPTION 9: BLENDED TEACHING AT SCHOOL (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Both online and face-to-face learning will be conducted on the school compound.		**N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**		Additional learning devices, including tablets and laptops, are needed. (**N.B.:** Those students who are able and determined to learn from home will also be facilitated.) Washbasins and hand sanitisers must be located at strategic points for easy access. Additional furniture Reorganising existing facilities to provide new learning areas		**Limitations:** Students spending less time at school may be at a disadvantage in terms of learning support. Parents and guardians may have challenges managing the days their children are required to engage in home- or remote-based learning. The monitoring and supervision of home-based or remote learning may pose a difficulty for schools.	

Modelling Option 10: Multioption--Blended Plus Any Other Appropriate Option(s)

This is a combination or integration of the blended options and other school-day models. Schools with unused or underused space and the resources to purchase and install equipment for electronic learning can take advantage of this model. It would also require additional teaching staff and technical support to ensure that the systems are maintained for optimum performance. This modelling option is appropriate for larger schools with access to resources. The teaching staff would need additional training and an adequate monitoring system instituted for ongoing evaluation.

MODELLING OPTION 10: MULTIOPTION--BLENDED PLUS ANY OTHER APPROPRIATE OPTION(S)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Modelling Option 10 is a combination of face-to-face and online learning at school, coupled with remote learning, which includes online learning at home. Face-to-face learning could include selected grades, or day attendance, or any other appropriate options. Note that online learning can be conducted on the school compound because of the availability of space and learning and teaching devices.	**Existing Space:** The school has excess space that can be converted into useable classrooms or learning areas. Also, some schools have extensive yard space that can accommodate outdoor classes. **Modified Space:** Existing space needs to be converted to useable classroom space. **Impact:** The school can integrate a variety of modelling options to address its learning and teaching needs.	**Rural:** Students will not need additional transportation, but the teaching schedule may vary based on the start and completion times of classes. **Urban:** Students will not need additional transportation, but the teaching schedule may vary based on the start and completion times of classes. **Impact:** There may be an earlier start for delivering students to school and a later time for picking them up from school.	**Teaching Staff:** Additional academic staff is required to satisfy the variety of options being implemented by the school. **Administrative Staff:** Maintain the same level of administrative staff. **Ancillary Staff:** Additional ancillary staff will be required because of the need for extensive and continuous cleaning and sanitising of facilities.	Students who are learning from home must be provided with a dedicated space with a chair and desk or table. The space should be comfortable, and all distractions, such as television, should be removed. Seating arrangements in classrooms, laboratories, and workshops must be laid out so that the physical-distancing protocol can be implemented in accordance with MoEYI standards. Learning areas are equipped for Internet-based learning and teaching.	**Duration:** Start time: 7:30 a.m. End time: 2:30 p.m. **Breaks:** Midmorning: 20 minutes Lunch:1 hour In-class breaks:10 minutes **Meals:** Breakfast and lunch	**Advantages:** The school can implement a combination of modelling options or options at the same time. The school has access to resources to implement the desired options. Students can learn both at home and at school based on the course or programme schedule.	**Human Resource Support:** Additional academic and ancillary staff Training of teachers to deliver online teaching **Equipment:** Equipment for handwashing, cleansing, and sanitising solutions Transportation

Modelling Option 10: Multioption--Blended Plus Any Other Appropriate Option(s) (Cont'd)

MODELLING OPTION 10: MULTIOPTION--BLENDED PLUS ANY OTHER APPROPRIATE OPTION(S)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
This Modelling Option is a combination of face-to-face and online learning at school coupled with remote learning, which includes online learning at home. The face-to-face learning could include selected grades, or day attendance, or appropriate options. Note that online learning can be conducted on the school compound because of the availability of space and learning and teaching devices.		**N.B.: Students must only travel in vehicles in which physical distancing and the wearing of masks are observed.**		Washbasins and hand-sanitising stations are located at strategic points for easy access. Additional furniture is required. Reorganising existing facilities to provide new learning areas		**Limitations:** The school has to manage several modelling options at the same time. This could lead to increased costs. There may be increased cost to the students for implementing a variety of modelling options. The multiplicity of modelling options will need greater monitoring to ensure effectiveness and efficiency.	

Case Studies on the Modelling Options of Four Schools

With the anticipation of the start of the new academic year, there is little doubt that most schools would have to adapt those modelling features that best suit their situation. However, the following case studies are being highlighted to assist those schools that are still seeking to settle on an option that will assure a minimal level of threat to the safety and security of the children they teach and to the wider school population. Even those institutions with advanced preparation could benefit and still learn from the cases presented as they seek to improve on the modelling options they have already developed. Coupled with the 10 modelling options that have been shared are the case-study modelling options of four schools for which preparations for reopening are at an advanced stage. Three of these schools - Ardenne High, Rhodes Hall High, and Mandeville Primary - were identified during the first consultation with principals held on June 26, 2020, by the National Council on Education to learn about the steps being taken to prepare for the new school year. The fourth school, Lyssons Primary, was recommended as one of the primary schools in eastern Jamaica that had created a modelling option best suited for the student population they serve. The modelling features adapted by these schools took into consideration factors such as location, available or expected resources, school type, space availability, size of operation, the capacity of students and parents to make a difference, among others. What is being highlighted here is the role of authentic school leadership where lessons learned, as a result of one's own experience, are shared with other school leaders to make a difference in school performance.

CASE STUDY 1

LYSSONS PRIMARY SCHOOL – SELECTED GRADES AND DAYS ATTENDANCE (ROTATIONAL MODELLIG OPTION)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
This is a rural school with a population of 1,040 students. This rotational modelling option is an example of the 'Selected Grades and Days Attendance Option' in which each grade is divided into two groups - *A* and *B*. The groups are rotated on a weekly basis. For the first week, Group *A* students will attend classes three days – Monday, Wednesday, and Friday. For the second week, Group *A* will attend school two days - Tuesday and Thursday. In the case of Group *B*, for the first week, students will attend school two days -Tuesday and Thursday. For the second week, Group *B* students will attend school three days – Monday, Wednesday, and Friday.	**Existing Space:** The current space is inadequate to accommodate all students at the same time if the physical-distancing protocol is to be observed. The school does not have the facility to provide new classrooms, so it has to make adjustments and convert existing space to accommodate learning and teaching.	The current transportation arrangements consist of private cars, chartered buses, a school bus, and walking by students living in the proximity of the school. Approximately 30 percent of the student population walks to school each day. The school bus does two pickups and drop-offs each day from Lethe Hall and one from Duhaney Pen. No special arrangements for transportation will be made for the new school year.	**Teaching Staff:** Two additional teaching staff are required. Seven support staff are required: one for the Special Education Unit and one for each grade. **Administrative Staff:** Two additional administrative staff are required. **Ancillary Staff:** Four full-time ancillary staff are needed. One will be assigned to each grade. (Two staff members are currently supported by the MoEYI.)	Fifty additional desks and chairs Three additional washbasins to accommodate eight persons at a given time. (Two are already in place.)	**Duration:** Start time: 8:30 a.m. End time: 3:00 p.m. An additional half an hour will be dedicated to students who need special support to keep abreast of other students. **Breaks:** Two lunch breaks: Lower school: 11:30 a.m. – 12: 15 p.m. Upper school: 12:15 p.m. – 1:00 p.m. Midmorning breaks: 10:00 a.m. -10:15 a.m. 10:15 a.m. – 10:30 a.m.	**Advantages:** Small class size results in increased opportunity for individualised attention. Less risk of infection No more than 580 persons will be accommodated each day on the compound.	**Human Resource Support:** Seven part-time support staff @ J$35,000.00 each per month - J$420,000.00 per annum. **Subtotal: J$2.94M** Two administrative-clerical assistants @ J$40,000.00 each per month - J$480,000.00 per annum. **Subtotal: J$.96M** Four ancillary staff needed @ J$35,000.00 each per month - J$420,000.00 per annum. **Subtotal: J$1.68M**

CASE STUDY 1 (Cont'd)

CASE STUDY 1: LYSSONS PRIMARY SCHOOL – SELECTED GRADES AND DAYS ATTENDANCE (CONT'D) (ROTATIONAL MODELLING OPTION)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
This rotation will continue until the end of the semester when all students would have attended school for an equal number of days. For the days the students are at home, they will be required to continue their schoolwork. Printed homework assignments will be prepared and packaged for students to complete at home under the supervision of parents and guardians. It should be noted that there will be limited online delivery because the experience with home-based learning and teaching during the school lockdown was that less than 30 percent of students had access to online facilities. Lyssons Primary has six classes per grade, with an average of 44 students per class. With the rotational modelling option, the school will have a class size of approximately 20 students adhering to physical distancing of 3-ft.	**Modified Space:** Additional space will be created by converting four existing rooms – the physical education room, the resource room, the library, and the computer room – into classrooms. In addition, the school will need tents, to be used as holding areas only; however, these tents can be of a sophisticated type that will accommodate learning and teaching under all types of weather conditions. **Impact:** If Lyssons Primary is required to implement physical distancing of 6-ft., there will be need for additional classroom space despite the rotational modelling option being implemented.	Parents are encouraged to utilise the school-bus system. Emphasis is placed on students wearing their masks at all times. A record of the names of students who travel on the school bus will be kept at all times in order to facilitate contact tracing if necessary. **Impact:** The school will be in a position to monitor how children travel to and from school.			To avoid disruptions in learning and teaching, there will be no break after lunch. Students who are unable to afford lunch will be invited to register half an hour before school starts in order to obtain lunch from the canteen.	**Limitations:** The time spent with students is reduced. This could have a negative impact on student performance. Students will be at a disadvantage when compared with other schools on a full programme. There will be limited opportunity for co-curricular activities.	**Equipment:** Three sanitising stations @ J$50,000.00 each (fixed cost) **Subtotal: J$.15M** **Total Cost: J$5.73M**

CASE STUDY 2

CASE STUDY 2: MANDEVILLE PRIMARY SCHOOL – SELECTED SCHOOL DAY MODELLING OPTION							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
This is a suburban school with a student population of 1,500. There are seven classes per grade. The 'Selected School Day Modelling Option' is being utilised in order to meet physical-distancing requirements. Particular grades are scheduled for school-based learning and teaching. Attendance may vary, with some grades being required to attend school all five days of the week while some attend three days per week, depending on need. The ideal plan, however, is to have half of the student population attending school while the other half is engaged in remote by online learning.	**Existing Space:** Even though the school was converted from a primary and junior high to a primary school, the population is still large. This is inconsistent with this change in school type as usually, there is a reduction in student population. So even though space was freed up, Mandeville Primary remains one of the largest non-secondary schools in Jamaica.	**Suburban:** Transportation is not an issue. The school is located near the town centre and most students come from nearby communities. There is a good relationship with the taxi operators. No special arrangement is required.	**Teaching Staff:** Ten additional teaching staff are needed to support the various subject areas. **Technical Staff:** Four technical IT staff to be engaged. (These are included in the 10 teaching staff.) **Administrative Staff:** Seven administrative clerical assistants will be engaged and assigned to each grade. **Ancillary Staff:** Currently, there are 12 ancillary staff members. Six more are needed to assist with catering to students, who will eat in their classrooms.	**Furniture:** Needed: 1,100 independent desks and chairs for grades 1 to 4 to facilitate 3-ft. physical-distancing requirements Six tents are needed. Fifty additional tables are needed Six additional washbasins are required. **Equipment:** Teaching equipment such as multimedia devices and laptops	**Duration:** Start time: 8:00 a.m. End time: 2:30 p.m. **Breaks:** Suggested break time is staggered as follows: Grades:1, 2, & 3: 9:45 a.m. to 10:15 a.m. Grades 4, 5, & 6: 10:15 a.m. to 10:45 a.m. Lunch break is staggered as follows: Grades:1, 2, & 3: 10:30 a.m. to 11:45 a.m. Grades: 4, 5 & 6: 11:45 a.m. – 12:30 p.m. **[N.B.: The time taken for break remains at the discretion of the teacher, and students will remain in their classrooms unless they have to visit the restroom.]**	**Advantages:** The school is centrally located, so students have ready access to transportation. Stakeholder support is high. This support includes taxi operators and businesses, among others. There is also strong parental support, which enhances the home-school relationship.	**Human Resource Support:** Ten teachers inclusive of IT staff @ J$108.333.00 each per month - J$1,300,000.00 per annum **Subtotal: J$13M** Seven administrative-clerical assistants estimated @ J$40,000.00 each per month - J$480,000.00 per annum. **Subtotal: J$3.36M**

CASE STUDY 2 (Cont'd)

CASE STUDY 2: MANDEVILLE PRIMARY SCHOOL – SELECTED SCHOOL DAY MODELLING OPTION (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
On a Monday, all students will be scheduled for online learning and teaching, with teachers operating from school. Only half of the school population will be on the compound at any given time. Students will attend school on alternate days, with grades 1, 2, and 3 on one day and grades 4, 5, and 6 on the other. This pattern will continue for the rest of the school year. A protocol document has been developed to guide the reopening of the school.	**Modified Space:** Although some space is available as a result of the school having been converted into a primary school, additional space is still required to facilitate the 6-ft. or 3-ft. protocol for physical distancing. The school will require six tents, which would allow some classes to be divided. The preference, however, is for the multi-purpose centre to be completed. This would accommodate over 289 students, including those with special needs who require additional face-to-face contact time.	**Suburban:** Transportation is not an issue. The school is located near to the town centre, and most students live in nearby communities. There is a good relationship with the taxi operators. No special arrangement is required.				**Limitations:** The school population, at 1,500, is large for a primary school that is located in a town centre. There is need to complete the multipurpose centre in order to comfortably accommodate more students. .	Currently, there are 12 ancillary staff. Six additional staff are required @ J$20,000.00 each per fortnight or J$480,000.00 per annum **Subtotal: J$2.88M** **Equipment:** Fifty-one additional laptops with cameras are needed per classroom @ J$37,250.00 each (fixed cost) **Subtotal: J$1.9M** Seven additional multimedia devices @J$44,700.00 each (fixed cost) **Subtotal: J$.31M**

CASE STUDY 2 (Cont'd)

CASE STUDY 2: MANDEVILLE PRIMARY SCHOOL – SELECTED SCHOOL DAY MODELLING OPTION (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Two Plans - *A* and *C* - have been devised to address the 6-ft. and 3-ft. physical-distancing protocol. Under Plan *A*, all students will remain at home on a Monday and participate in electronic engagement via Google Meet. On this day, planning sessions will be conducted with the teachers while the school is being fully sanitised. Half of the student population will report to school on Tuesday and Wednesday and the other half on Thursday and Friday.	**Impact:** With the completion of the multipurpose centre, all students would be accommodated five full days per week, and the centre would also cater to special-needs students in adjoining communities. Most important, the physical-distancing protocol could be implemented as a result of the additional space provided. .						**Furniture** Seven hundred and fifty independent chairs and desks at J$7,500.00 per unit (fixed cost) **Subtotal: J$5.63M** Fifty additional tables@ J$15,000.00 each (fixed cost) **Subtotal: J$.75M**

CASE STUDY 2 (Cont'd)

CASE STUDY 2: MANDEVILLE PRIMARY SCHOOL – SELECTED SCHOOL DAY MODELLING OPTION (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Plan *C* was devised to meet the new directive to observe the 3-ft. protocol for physical distancing. Under Plan *C*, the selected day for students to remain at home and to be engaged electronically, via Google Meet, is Friday. On Monday and Tuesday, grades 1, 2, and 3 will attend school, and grades 4, 5, and 6 will attend on Thursday and Friday. **Special feature:** A parental-support model will be developed to assist parents to effectively monitor their children's performance during remote or home-based learning.							Six additional washbasins @ J$8,500.00 (fixed cost) **Subtotal: J$.051M** Six tents @ J$1,200,000.00 million each (fixed cost) **Subtotal: J$7.2M** **Total Cost: J$35.08M**

CASE STUDY 3

CASE STUDY 3: ARDENNE HIGH SCHOOL MULTIOPTION MODELLING OPTION - BLENDED & STAGGERED							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
This is an urban school with a population of 1,945 students. A multi-option modelling option that incorporates the blended features of at-home and at-school learning and teaching is being adopted. The modelling option also includes staggering between lower and upper grades and allows for extended space. Implementation will be as follows: **Alternate Day:** **Grade 7** -Three days per week **Grades 8 & 9** - One-two days per week **Grades 10 & 11**-Three days per week **Grades 12 & 13**-One day per week, mainly remote-based learning	**Existing Space:** The school is built on a fairly expansive compound and has large classrooms. It has a number of rooms that are designated for activities such as dance, clubs, and societies. These facilities are underused because the activities are usually held for only a small portion of the day. Also, there is enough land space to erect tents, and the existing gazebos can be utilised for class activities. **Modified Space:** Additional space will be created with the erection of tents, the utilisation of gazebos, and the existing space in the dance and music rooms. These were originally designed for co-curricular activities but will be converted into temporary classrooms. Co-curricular or enrichment activities relating to dance and music have not been curtailed as the space will be shared.	**Rural:** There is limited control in terms of students travelling from rural areas such as Clarendon and St. Catherine. **Urban:** Organised transportation is required for all students. A planned approach to transportation is being pursued. A partnership with the Jamaica Urban Transit Company is in place to take students to and from school to the Transport Centre. A designated area for embarking and disembarking is required. Private arrangements are organised by some parents for their children. Buses are usually on time.	**Teaching Staff:** Approximately 48 additional full-time teachers are required to support split classes participating in online and face-to-face modalities on the school campus. Four system administrators to assist students with online classes One food lab technician Four ancillary staff required to carry out the additional cleaning and sanitisation of classrooms and workspaces	Additional wash-basins and hand-sanitising stations installed at strategic points for ease of access Furniture required for additional teachers Twenty additional Chrome Books Thirty additional Internet-access points Increased bandwidth and Internet access points Lessons recorded and placed in Google Classroom for continuous access	**Duration:** Start time: 7:25 a.m. End time: 3:00 p.m. **Breaks:** Midmorning: 20 minutes Lunch: 40 minutes Lunch served in classrooms In-class breaks: 5 minutes Teaching hours: five and a half hours per day	**Advantages:** The multioptional strategy that has been adopted by the school will allow students to be accommodated based on their needs. For example, students who have limited or no access to Internet service at home will be accommodated at school. Limited exposure due to less contact with students Travelling to and from school reduced Those students who are better at auditory learning will be at an advantage. **Limitation:** The many components of the multioptional modelling option could pose a problem if not managed effectively.	**Furniture:** No additional furniture for students Additional furniture required for new teaching staff **Equipment:** Increased bandwidth fixed cost per annum **Subtotal: J$.25M** Thirty Internet access points @ J$75,000.00 per month - J$.9M per annum **Subtotal: J$.9M** Twenty Chrome Books **Subtotal: J$1M** Internet connection **@**J$41,666.00 - J$.5m per annum **Subtotal: J$.5M**

CASE STUDY 3 (Cont'd)

CASE STUDY 3: ARDENNE HIGH SCHOOL MULTIOPTION MODELLING OPTION - BLENDED & STAGGERED (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
	The students who are displaced after a class has been divided will be accommodated in the space created at the improvised locations. Their learning and teaching will continue, using the online and face-to-face blended modality offered synchronously. **Impact:** Based on grade level, some students will give up space at school and remain at home three to four days per week. This would provide additional space to facilitate physical distancing.	**Impact:** Fewer students travelling to and from school each day Fewer students will be congregating at drop-off and loading points. Risk of infection may occur at the time of arrival and departure Students are encouraged to observe physical distancing and to wear masks at all times. **A total of 1,000 students will be accommodated on the campus at any given time.**	**Administrative Staff:** No additional administrators will be required.			**Limitations:** Less contact time with school leaders as student leaders will not be present every day Removal of Health and Family Life Education and/or Guidance from the curriculum. Reduced contact sports and introduction of sports with less risk Given the fairly large population, there is risk of infection with students gathering while embarking and disembarking from vehicles. Students may need greater instructional support. Reduction in enrichment or co-curricular activities The transitioning from home to school could be unsettling for some students. Greater burden on parents and guardians to manage children while studying at home	**Human Resource Support:** Four system administrators @ J$ 108.333.00 per month - J$1,300,000.00 per annum **Subtotal: J$5.36M** 48 teachers @ J$107,368.00 per month - J$1,288,416.00 per annum **Subtotal: J$61.56M** One Food Lab. technician @ J$ 108.333.00 per month- J$1,300,000.00 per annum **Subtotal: J$1.3M** Four additional ancillary staff at J$35,000.00 per month - J$420,000.00 per annum **Subtotal: J$1.68M** **Total Cost: J$72.60M**

CASE STUDY 4

CASE STUDY 4: RHODES HALL HIGH SCHOOL – EXTENDED DAY/MULTIOPTION MODELLING OPTION							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
This school has approximately 1,100 students who are predominantly boys. This is a rural school with a multioption modelling option that seeks to balance the blended, face-to-face, and on-campus online options. The on-campus online feature is designed to facilitate students who face challenges with Internet access and interconnectivity at home. The multi-functional modelling option also includes expanded space, which is done by erecting tents and utilising a multi-purpose hall.	**Existing Space:** This is a new school, and the classes are of standard size but not sufficiently large to allow for physical distancing. As a result, additional space has to be created. **Modified Space:** Additional space will be added through the erection of tents and the use of a multi-purpose hall to accommodate 100 students. .	**Rural:** All students will be required to be transported to school each day. At present, the school has pickup points in Negril and Lucea to facilitate the transfer of students from surrounding areas. Partnerships to be explored with bus drivers, the Montego Bay Metro, and other schools where possible Late transportation is required to be arranged by the school. Students who live in the proximity of the school will provide their own transportation by riding bicycles and motor bikes while adhering to the safety protocols, including the wearing of helmets.	**Teaching Staff:** Maintain same level of full-time academic staff supported by additional five part-time teachers. . Online teaching is offered remotely by teachers while students are at school. This will accommodate teachers with underlying health conditions, who will be able to work from home. Additional administrators and lab technicians will be needed to assist with online classes and the supervision of TVET subjects in laboratories.	**Furniture:** Six additional washbasins and hand-sanitising stations located at strategic points for easy access (The school has eight washbasins located at strategic points on the compound.) No additional furniture is required. **Equipment:** Teaching equipment such as multimedia devices will be needed.	**Duration:** Five-day school week **Grades: 7-9** Start time: 7:30 a.m. End time: 11:30 a.m. **Grades**: 10-13: Start time: 10:25 a.m. End time: 3:30-4:00 p.m. Grades are staggered, with grades 7-9 starting earlier and grades 10-13 coming in while grades 7-9 are leaving.	**Advantages:** Regular attendance encouraged Contact time guaranteed Less dislocation **Limitations:** Large numbers of students are still attending school at the same time. A policy on the maximum number of students that are allowed on the school premises at a given time is required.	**Human Resource Support:** Two additional ancillary workers @ J$41,666.00 each per month or J$500,000.00 per annum **Subtotal: J$1M** **Equipment:** Handwashing equipment, cleansing and sanitising solutions: J$50,000.00 every 6 weeks **Subtotal: J$1.9M** Six washbasins @ J$33,000.00 each **Subtotal: J$.2M**

CASE STUDY 4 (Cont'd)

CASE STUDY 4: RHODES HALL HIGH SCHOOL – MULTIOPTION MODELLING OPTION WITH EXTENDED DAY (CONT'D)							
Main Features	**Physical Space**	**Transportation**	**Manpower/HR Requirements**	**Facilities Requirements**	**Scheduling**	**Advantages/ Limitations**	**Cost Elements**
Another feature of the multifunctional modelling option is offering TVET theory and practical classes separately and assigning students accordingly. This allows TVET classes to be divided into two groups. Half of the class is assigned to do theory and the other half to do practical activities. This is reversed once per week. Grouping is only done where physical distancing cannot be accommodated. **Staggering:** The third feature of the modelling option is staggering.	**Impact:** The additional space will allow for the school to implement the 6-ft. physical-distancing requirement.	A major form of transportation is bike taxi. **Impact:** Fewer students travelling to and from school each day Fewer students will be congregating at drop-off and loading points. **N.B.: Students must only travel in vehicles that observe physical distancing and the wearing of masks.**	**Administrative Staff:** No additional administrators will be required; however, additional system administrators will be needed. **Ancillary Staff:** Two additional ancillary staff are required to carry out the extra duties for the cleaning and sanitising of classrooms and workspaces. (The school has six ancillary staff and four groundsmen.)		**Breaks:** Midmorning: 20 minutes Lunch:1 hour **Grades: 7-9:** 12:30 p.m. to 1:00 p.m. **Grades** 10-13: In-class breaks: 10 minutes at 3:00 p.m. **Meals**: Breakfast and lunch served in classrooms		2 system administrators @J$58,333.00 each per month - J$700,000.00 per annum **Subtotal: J$1.4M** 5 part-time teachers @ J$58,333.00 each per month - J$700,000.00 per annum **Subtotal**: **J$3.5M** Teaching equipment: upgrading of smart TVs to facilitate online teaching cost is negligible. **Total Cost: J$8.M**

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