

STRENGTHENING HEALTH AND FAMILY LIFE EDUCATION IN THE REGION



**The Implementation, Monitoring, and Evaluation of HFLE
in Four CARICOM Countries**

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I. EXECUTIVE SUMMARY

NEED AND STUDY RATIONALE

Globally, several studies have pointed to the positive impact that life skills-based health education programmes have on the attitudes and behaviours of young people, but no such evaluation has been conducted in the Caribbean. While a Regional Curriculum Framework to support Health and Family Life Education (HFLE) guides country efforts, CARICOM, UNICEF, and the Ministries of Education and HFLE Coordinators in four countries (Antigua and Barbuda, Barbados, Grenada, and St. Lucia) identified the need for a Common Curriculum to support the delivery of classroom lessons. This evaluation was designed to document the development, implementation and impact of the initial roll-out of this Common Curriculum for youth in Forms 1, 2, and 3, when life skills become critical in helping students avoid risks and make healthy choices that protect their futures.

CURRICULUM DEVELOPMENT

Building on learning and resources from past efforts in the region, a Common Curriculum, with specific interactive, life skills-based classroom lessons, was developed for two HFLE content themes: *Self and Interpersonal Relationships*, and *Sexuality and Sexual Health*. Selected in collaboration with the Ministries of Education, these two themes address priority health issues of violence and HIV /AIDS. Taken together, they aim to provide youth with knowledge and skills that promote healthy behaviours and contribute to school and future success. Using the Regional Curriculum Framework as a guide, HFLE Country and Regional Coordinators and educators came together to develop and then refine coordinated lesson plans for Forms 1-3. Lessons in Form 1 provide a foundation that is supplemented and reinforced as students get older and meet new challenges. This “spiralling” assures that content and core skills are covered each year at developmentally appropriate levels, as students’ sophistication to apply these skills increases.

Research on health promotion and education shows that benefits are more likely to be achieved when programmes have a strong theoretical grounding. The foundation for a life skills approach is based on multiple theories of child and adolescent development, cognitive learning, and social influences. These have depicted how knowledge, attitudes, and skills can help youth avoid problem behaviours and foster personal resiliency to counter risks and negative peer pressures. Previous studies have demonstrated that competence in the use of life skills may reduce the chances of young people engaging in aggressive and anti-social behaviours, substance use, and related risks, including early and unprotected sexual intercourse. These, in turn, have serious and often life-long health and social consequences (UNICEF, 2000; World Health Organization, 2003).

By providing life skills education in Forms 1-3, students have opportunities and hours to practice skills they need, both now and in the future. In addition to being theoretically grounded, the extensive, collaborative development process helped assure that the Common Curriculum is culturally appropriate to the life experiences of adolescents in the Caribbean. Critical health issues are tackled through participatory activities that are both timely and relevant—for schools, families, and students. Care was also taken to assure that lessons address gender differences in both development and challenges faced. Finally, the fully-scripted lessons are designed so they

can be used by teachers, even if they have relatively little experience delivering health education or leading interactive activities, as is often the case.

To support teachers, a companion training manual was developed, and trainings were offered annually in the participating countries. Back in their classrooms, these trained teachers facilitated interactive exercises designed to build life skills, including critical thinking, problem solving and decision making; communication, negotiation and refusal skills; healthy self-management, coping, and help-seeking. This focus is supported by research that shows that youth who fail to acquire these skills are more likely to engage in unhealthy behaviours, such as violence, early sexual risk taking, and abuse of alcohol and drugs, and to be at higher risk of poor academic performance.

EVALUATION STUDY OBJECTIVES

By implementing the Common Curriculum in diverse school settings and countries, the overarching goal is to have a positive impact on student health. Consistent with a logic model that guided the development of the curriculum and its evaluation, improved student health will, in turn, ultimately improve students' school attendance and enhance their learning outcomes. Toward this end, this evaluation study sought to:

- Finalize, implement, and monitor a standardized, Common Curriculum that conforms to the HFLE Regional Framework and has two content themes: *Self and Interpersonal Relationships* and *Sexuality and Sexual Health*. Together, these themes address the critical need for violence and HIV prevention within the region;
- Study the impact of this curriculum on student outcomes, along with the process of implementation in the four countries.

WHAT WE DID

Two types of evaluation were conducted. Process evaluation documented Common Curriculum lesson development, teacher training, and implementation. It also provided data to guide refinement of the curriculum and training materials for dissemination. Impact evaluation assessed student outcomes resulting from curriculum implementation. Data also provide useful information about student knowledge, attitudes, skills and behaviours at the regional level. These data can be used to monitor student health and inform programme and policy initiatives.

Process evaluation included interviews with school administrators and HFLE Coordinators, periodic observations of teachers delivering Common Curriculum lessons, and teacher and student unit assessments completed in the intervention schools after units addressing the two content themes were taught. Teachers were asked to provide feedback about what works and what needs to be improved.

The impact evaluation employed a quasi-experimental pre-post matched pairs design to examine the impact of the Common Curriculum implementation on students. The primary question addressed is: *Do students in intervention schools report more positive attitudes and norms, greater knowledge, more life skills, and fewer risky behaviours than students in their paired comparison schools?* Two critical factors shaped the context in which this question was

addressed. First, the Common Curriculum was designed to supplement--not supplant--other ongoing efforts in the region to train teachers on the HFLE Framework and support the delivery of life skills education. Thus, the evaluation compares “standard practices” that, in most schools, includes delivery of health education with the provision of “enhanced” Common Curriculum lessons. While this comparison may mute differences in student outcomes between delivery of standard practices and the new intervention, it acknowledges that health education efforts, guided by the Regional Framework, have been underway in the Caribbean. Second, this curriculum was developed in tandem with carrying out evaluation activities. That is, lessons were developed, revised, and refined, informed by the process evaluation. Teachers were trained and delivered lessons for the first time during the impact evaluation period, while they still were becoming familiar with the new content and pedagogy.

Country Coordinators and Ministries in Antigua, Barbados, Grenada and St. Lucia each identified three pairs of schools that were similar in terms of size, urban/rural location, academic performance, gender composition, and perceived student behavioural risk. All schools selected were willing and had the capacity to implement the intervention and evaluation procedures. Administrators agreed to:

- Assign teachers to lead two forty-minute HFLE periods per week (timetabled)
- Expose students to three years of the reinforcing, spiralling Common Curriculum
- Ensure that teachers who teach the Common Curriculum would receive basic training in HFLE provided annually by the HFLE Country Coordinator.

Intervention schools began implementing the new HFLE Common Curriculum with all Form 1 students during the 2005–2006 school year. Form 2 was implemented during the 2006–2007 school year, and Form 3 was implemented during the 2007–2008 school year. Thus, the Common Curriculum was introduced in stages. Each year, teachers in the intervention schools were offered training on the new *Self and Interpersonal Relationships* and *Sexuality and Sexual Health* lessons. In the comparison schools, students received standard HFLE or other health classes that were already part of the curriculum. As with the Common Curriculum, what was taught in the comparison schools was often guided by the HFLE Regional Curriculum Framework.

ACCOMPLISHMENTS AND FINDINGS

“[HFLE class] teaches you about life and mostly about yourself, and it teaches you how to handle situations which may occur in life.” Form 2 Student

“I enjoyed seeing the students come alive with authentic pedagogy as opposed to textbook information that is dry and boring.” HFLE Common Curriculum Teacher

Process Evaluation

With input from teachers, HFLE Coordinators, and the Regional HFLE Coordinator, an EDC development team transformed the HFLE Regional Curriculum Framework into skills-based

lessons that are: multi-year (Forms 1-3); fully scripted; interactive; skills-based; spiralling, and focus on the chosen content themes: *Self and Interpersonal Relationships* and *Sexuality and Sexual Health*. A total of 40 Form 1 lessons were initially developed for the two units, based on initial in-country assessments of what was possible and important to cover. However, based on teacher feedback and observations, it became apparent that less classroom teaching time was available than at first assumed. Therefore, 10 lessons per unit were developed for Forms 2 and 3. Throughout the study, feedback from teachers and Country Coordinators was incorporated into a final, revised package of lessons for dissemination, with 10 lessons per unit for each Form.

During Year 1, a training of trainers was attended by Country Coordinators, representatives of teacher colleges, and others. Following this event, multi-day trainings in each country were led by Country Coordinators; training days were observed by UNICEF and EDC staff. Based on feedback from the first-year implementation, a Training Manual was created to help assure teachers were prepared similarly across countries.

In the intervention schools, student and teacher unit assessments were collected at five time points. Numbers of participating students per assessment ranged from 714 to 1279; numbers of participating teachers ranged from 9 to 17. Periodic classroom observations in intervention and comparison classrooms were conducted, although due to resource constraints, fewer observations were held than planned. Baseline and follow up teacher surveys were conducted; 42 teachers completed baseline surveys. At follow up, 21 teachers completed surveys. Administrator and Country Coordinator end-of-year surveys/interviews were conducted as time and resources allowed. Taken together, these evaluation activities documented the process of implementation and its challenges.

Overall, teachers were very enthusiastic about the Common Curriculum; most were comfortable with lesson content. Teachers reported students were engaged in activities and learned new things. They felt lessons were developmentally and culturally appropriate and covered important topics. Results for student unit assessments are consistent with these findings. Further, most teachers felt that the lessons would have a “moderate” or “large” impact on students, and a majority said they would be “very likely” to recommend lessons to their peers. Examples drawn from classroom observations conducted by Coordinators document this enthusiastic reception. For example, as one observer noted:

“The students demonstrated their knowledge of the skill using the scenario, but more important were their attitudes and opinions on cell phone availability, use and misuse, and the rules they believe should be put in place. They then utilized critical thinking and highlighted a number of other issues...peer pressure to have the latest and more expensive [things], envy and conflict, stealing, bullying, breakup of friendships because of gossip, inappropriate ways of acquiring the phones or the money to do so. The discussion was spirited, but focused. The continuing activity was for them to write letters to authorities on the topic of whether cell phones should be allowed in schools.”

Despite enthusiasm, teachers expressed concerns throughout the study about whether there was enough time to complete lessons. Indeed, only 20-35% of teachers said lessons fit teaching time. Teachers had ongoing problems with scheduling HFLE class time, disruptions and time

management. This raises issues about whether sufficient time is allocated for HFLE (or can be, given other priorities and school schedules). Many teachers had little classroom experience, or any experience using the pedagogic, interactive strategies that are integral to Common Curriculum. Further, there was substantial teacher turnover from year to year, as well as some turnover within a year that impeded lesson completion. Late teacher assignments made advanced planning for training difficult.

Despite these challenges, the Common Curriculum had a positive impact on practice at the intervention schools. Overall, these teachers reported receiving more HFLE training than comparison school teachers (even though teachers in the intervention schools had reported less training at baseline). They also reported higher levels of preparedness to teach HFLE, and greater comfort teaching HFLE topics.

By follow up, nearly 60% of the intervention school teachers, but less than 20% of comparison school teachers, said HFLE is more important than other subjects. Also, fewer reported administrative barriers to teaching HFLE. Moreover, at the end of the study, virtually all teachers—in both intervention and comparison schools—wanted additional training on HFLE.

Impact Evaluation

Over 4000 student surveys were collected to inform the impact evaluation. As shown below, during Fall 2005, 2364 Form 1 students completed baseline surveys. During Spring 2008, 1909 Form 3 students completed follow up surveys.

Country	Form 1 (2005) Students	Form 3 (2008) Students
Antigua	299	135
Barbados	698	488
Grenada	525	583
St. Lucia	842	703
TOTAL SAMPLE	2364	1909

Students were an average age of 12.0 years at the baseline Form 1 Survey; students surveyed at the Form 3 follow up were an average age of 14.7 years. All students present on the day of survey administration completed surveys. In addition to informing impact evaluation, results from surveys provide the region with information about the attitudes, knowledge, and behaviours of youth as they advance from Form I to Form III.

The curriculum was intended to be a three-year programme. However, more students than expected may not have attended the same school for Forms 1, 2 and 3, making it difficult to assess level of exposure to the Common Curriculum, which was intended to be a three-year intervention. Nonetheless, there is a significant and positive difference in HFLE exposure: Virtually all students in the intervention schools (96%) reported they had HFLE in prior years, compared to 81% of those in the comparison schools.

Planned analyses, comparing matched pairs of schools, reveal no pattern of significant positive effects of the Common Curriculum on Form 3 students' self-reported attitudes, behaviours, and skills in health domains related to the themes of *Self and Interpersonal Relationships* and

Sexuality and Sexual Health. Multiple outcomes were examined, including peer norms, attitudes, and refusal skills related to substance use, violence, and sex; lifetime and recent reports of risk behaviours; HIV/AIDS related knowledge and stigma; and self-reported life skills related to interpersonal relationships, sexual relationships, and help-seeking from adults. Findings from additional descriptive and multivariate analyses provide similar results.

While this evaluation of HFLE has not identified a consistent pattern of positive effects on student health outcomes, there are no significant negative effects either. That is, student reports are very similar across conditions. However, it is important to note that there may be benefits that were not assessed. Moreover, findings may reflect initial implementation difficulties that were experienced during the roll-out of the Common Curriculum, as well as the difficulty of showing differences between the “standard” health education provided to students in the comparison condition and the “HFLE enhanced” lessons in the new curriculum. Once a programme is institutionalized and teachers have experience in its delivery, more benefits may be identified. This calls for ongoing monitoring of implementation, fidelity, and outcomes.

Consideration of Limitations, Challenges and Study Contributions

Multiple factors can influence the outcome of a study, particularly in the real-life settings of schools and classrooms, where there are competing priorities and complex demands. Here, attribution of outcomes to the intervention was complicated by a number of significant implementation challenges. These include the fact that lessons were not fully implemented in any year, finding time to teach remained problematic, and ongoing problems with teacher selection, turnover, and training persisted. Further, all teachers in intervention schools and comparison schools received basic training in HFLE. Topics taught in intervention and comparison schools were at times similar, placing the emphasis on discerning differences in pedagogy. Although information was obtained on the process of lesson implementation during each Form (i.e., through unit assessments completed by teachers and students and a small number of classroom observations), process information was relatively limited. For example, there was not systematic collection of data on such variables as what lessons—or pedagogy—worked best or were preferred by teachers and students, what social and environmental factors may have influenced effectiveness (e.g., frequency/length of classes, classroom composition). In future studies, examination of these factors may yield important information for supporting implementation and improving student outcomes.

At this time, there is insufficient evidence to conclude that implementation of the Common Curriculum in the four countries has resulted in a measurable impact on student health indicators. However, this does not mean that HFLE is not working or that it is unimportant for students' health and well-being. Rather, during the initial years of developing and implementing the Common Curriculum, the evaluation did not detect significant improvements over standard HFLE practices (as delivered in comparison schools). However, many lessons were learned about the process of classroom implementation and challenges faced by schools and teachers in the initial stages of programme adoption. Future evaluation will help document progress in meeting these challenges and monitor the benefits to students when lessons are fully implemented and effectively delivered.

In addition to focusing on differences between schools adopting the Common Curriculum and those in the comparison condition, there are multiple ways that information obtained can be used to further efforts in the region. Each of the participating countries has obtained valuable data on student health indicators to inform policy and practice directions; these data can also be used to establish a baseline for monitoring trends over time. Finally, documentation of both the successes and obstacles faced by schools and teachers as they implemented the programme can inform dissemination efforts.

RECOMMENDATIONS

The evaluation of the implementation and impact of efforts to introduce a Common Curriculum that supports the HFLE Regional Curriculum Framework has provided many lessons for informing future directions. It also raises critical questions that need to be addressed at the Ministry level to maximize the success of dissemination and provide the infrastructure needed for full delivery. The findings in the preceding sections identify challenges both with regard to the scope of the HFLE Common Curriculum and with regard to the process of school adoption and implementation. To be effective in teaching students the life skills that will promote their health and well-being as well as school success, addressing these challenges is critical.

One set of challenges pertains to the curriculum. Documentation of implementation challenges raises questions regarding: How many units (and lessons within a unit) can be realistically taught per year? Can and should this time allotment be the same for all three Forms? What “dosage” of HFLE is likely to maximize benefits for students? Should the health targets of units and lessons be narrowed to assure that priority health problems, such as violence and HIV/AIDS, are sufficiently addressed?

Another set of challenges pertains to implementation. Difficulties of achieving full implementation raise questions that must be considered at the Ministry and school level. For example: How can a cadre of teachers be identified, trained, and retained to deliver effective lessons? How can lesson delivery be monitored to support fidelity and increase effectiveness? What Ministry and school administrative support is needed to assure implementation? Since students change schools, how can school programmes, such as this curriculum be implemented country-wide?

As these broader questions are being addressed, there are several concrete steps that can be taken to move forward HFLE efforts:

First, this study has shown that implementation issues are a major factor in all pilot countries. Therefore, the success of HFLE relies on the ability of Ministries to sustain support for HFLE and ensure that HFLE is timetabled into classroom schedules and that this schedule is adhered to. In addition, both Ministry and local school administrator support is needed to ensure early selection of teachers and allow time for training. Training is critical to success, given the sensitivity of much of the content covered and the fact that many teachers had not previously led interactive, participatory exercises.

Second, observations and documentation of classroom delivery support the importance of providing a standardized curriculum, as done here. The availability of a fully scripted

curriculum facilitates lesson delivery in a way that a Regional Curriculum Framework alone does not. This is especially important when, as is often the case, there is teacher turnover and many teachers assigned to HFLE have limited experience either with the content or pedagogy. It is notable that teachers and students welcomed the interactive, participatory approaches of HFLE as well as the activities that were incorporated in the Common Curriculum.

Third, even with specified lessons, classroom delivery varied across countries, schools, and classrooms. To maximize benefits to students, monitoring and documenting classroom implementation is important for assuring that the goals of the Regional Curriculum Framework and Common Curriculum are addressed and the lessons are taught with sufficient fidelity to maximize effectiveness.

Fourth, competing priorities for classroom time must be balanced with the goals of HFLE. In this evaluation, only two HFLE units were developed, delivered and evaluated; it was difficult for many teachers to implement 10 lessons per theme. However, two other themes—one addressing eating and fitness and the other, managing the environment—are also regional priorities. For these four themes to be addressed, it will be important to make hard decisions about what and how much can be covered in each Form.

Finally, findings point out the need to better understand the many factors that influence implementation, fidelity to the Common Curriculum, and outcomes achieved. In addition to documenting effectiveness as dissemination proceeds, it is important to learn from and attend to the realities of what happens in classrooms, and how teachers can be best prepared and supported in the delivery of life skills-based health education.

In sum, this evaluation marked a positive step forward in developing and documenting classroom implementation of a HFLE Common Curriculum. Findings are the result of successful, multi-year, collaborative efforts across the region and within each participating Ministry and school, and underscore both the challenges and potential of coordinated curriculum and training approaches to meet student health needs.

REFERENCES

UNICEF. (2000). *Skills-Based Health Education to Prevent HIV/AIDS*. Accessed January 2008 at <http://www.unicef.org/lifeskills/index.html>.

World Health Organization (WHO). *Skills-based health education including life skills: An important component of a Child-Friendly/Health-Promoting School*, Information Series on Health, Document 9. Accessed January 2008 at www.who.int/school_youth_health/media/en/sch_skills4health_03.pdf.

II. INTRODUCTION TO STUDY AND GOALS

Globally, several studies have pointed to the positive impact that life skills-based health education programmes have on the attitudes and behaviours of young people, but no such evaluation has been conducted in the Caribbean. While a Regional Curriculum Framework to support Health and Family Life Education (HFLE) guides country efforts, CARICOM, UNICEF, and the Ministries of Education and HFLE Coordinators in four countries (Antigua and Barbuda, Barbados, Grenada, and St. Lucia) identified the need for a Common Curriculum to support the delivery of classroom lessons. This evaluation was designed to document the development, implementation and impact of the initial roll-out of this Common Curriculum for youth in Forms 1, 2, and 3, when life skills become critical in helping students avoid risks and make healthy choices that protect their futures.

HFLE is a comprehensive, life skills-based programme, which focuses on the development of the whole person in that it:

- Enhances the potential of young persons to become productive and contributing adults/citizens.
- Promotes an understanding of the principles that underlie personal and social well-being
- Fosters the development of knowledge, skills and attitudes that make for healthy family life.
- Provides opportunities to demonstrate sound health-related knowledge, attitudes and practices.
- Increases the ability to practice responsible decision-making about social and sexual behaviour.
- Aims to increase the awareness of children and youth of the fact that the choices they make in everyday life profoundly influence their health and personal development into adulthood.

Research on health promotion and education shows that benefits are more likely to be achieved when programmes have a strong theoretical grounding. The foundation for a life skills approach is based on multiple theories of child and adolescent development, cognitive learning, and social influences. These have depicted how knowledge, attitudes, and skills can help youth avoid problem behaviours and foster personal resiliency to counter risks and negative peer pressures. Previous studies have demonstrated that competence in the use of life skills may reduce the chances of young people engaging in aggressive and anti-social behaviours, substance use, and related risks, including early and unprotected sexual intercourse. These, in turn, have serious and often life-long health and social consequences (UNICEF, 2000; World Health Organization, 2003).

Building on learning and resources from past efforts in the region, a Common Curriculum, with specific interactive, life skills-based classroom lessons, was developed for two HFLE content themes: *Self and Interpersonal Relationships*, and *Sexuality and Sexual Health*. Selected in collaboration with the Ministries of Education, these two themes address priority health issues of

violence and HIV /AIDS. Taken together, they aim to provide youth with knowledge and skills that promote healthy behaviours and contribute to school and future success. Using the Regional Curriculum Framework as a guide, HFLE Country and Regional Coordinators and educators came together to develop and then refine coordinated lesson plans for Forms 1-3. Lessons in Form 1 provide a foundation that is supplemented and reinforced as students get older and meet new challenges. This “spiralling” assures that content and core skills are covered each year at developmentally appropriate levels, as students’ sophistication to apply these skills increases.

By providing life skills education in Forms 1-3, students have opportunities and hours to practice skills they need, both now and in the future. In addition to being theoretically grounded, the extensive, collaborative development process helped assure that the Common Curriculum is culturally appropriate to the life experiences of adolescents in the Caribbean. Critical health issues are tackled through participatory activities that are both timely and relevant—for schools, families, and students. Care was also taken to assure that lessons address gender differences in both development and challenges faced. Finally, the fully-scripted lessons are designed so they can be adopted by teachers, even if they have relatively little experience delivering health education or leading interactive activities, as is often the case.

The study builds upon a foundation of ongoing collaborative efforts among CARICOM, UNICEF, and EDC. Whilst EDC/HHD is providing overall technical guidance, key CARICOM stakeholders are actively involved in the study. It was essential to engage decision makers in the implementation process and to obtain their commitment of resources needed to successfully develop, implement, and evaluate the Common Curriculum. Thus, leaders from each country—Ministers of Education, Chief Education Officers, representatives from National AIDS Committees, HFLE Coordinators, and principals from participating schools—were brought on board as early as possible in the evaluation design. Responsibilities and outcomes for participation in and support of the project were agreed to and finalised at the highest level. As a result, a strong network of sub-regional support is being established to monitor HFLE curriculum implementation and to provide more immediate hands-on technical assistance to the countries. The participation of these stakeholders is helping to build capacity in the region to develop and implement similar studies in the future. It is also contributing to a continuity of leadership in this work that will ease the curriculum’s expansion to other Caribbean countries.

By implementing the curriculum in diverse school settings and countries, the study’s overarching goal is to have a positive impact on student health. Improved student health will, in turn, improve students’ school attendance and enhance their learning outcomes. Toward this end, the study seeks to achieve two major goals:

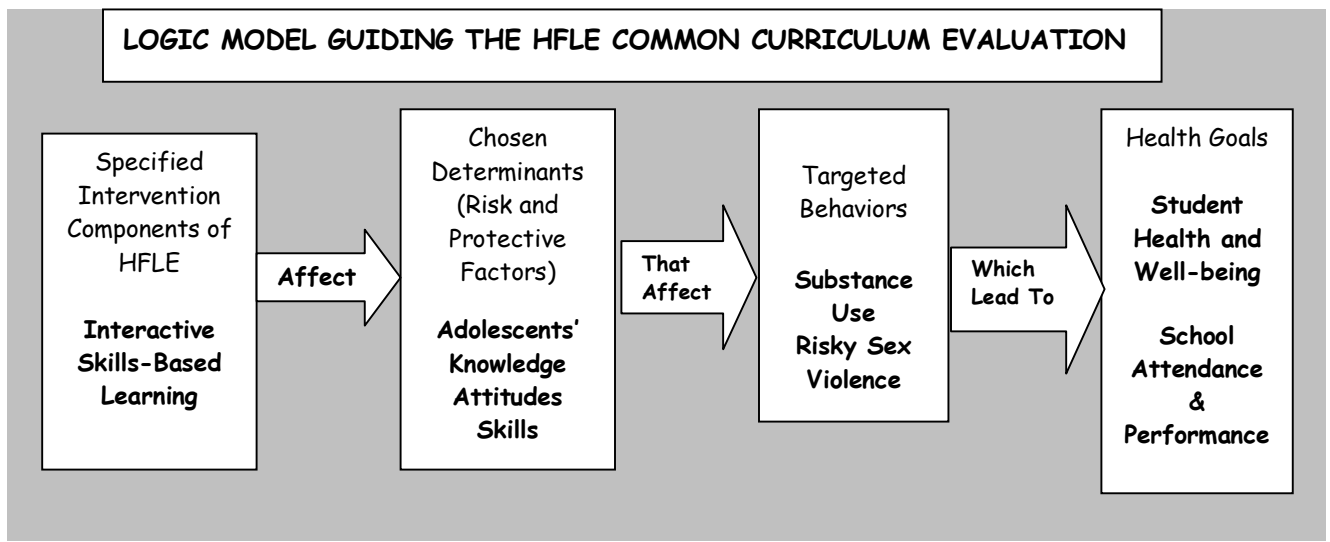
- To finalize, implement, and monitor a standardized, Common Curriculum that conforms to the HFLE Regional Framework and has two content themes: *Sexuality and Sexual Health* and *Self and Interpersonal Relationships*. Together, these themes address the critical need for HIV and violence prevention within the region.
- To study the impact of this curriculum on student outcomes, along with the process of implementation in the four countries.

III. EVALUATION METHODOLOGY

The purpose of the evaluation is two-fold. First, process evaluation activities were designed to document HFLE Common Curriculum lesson implementation and to provide data to guide the refinement of the curriculum and training materials for subsequent dissemination. Second, impact evaluation was designed to assess student outcomes resulting from curriculum implementation. In addition, data collected over the course of the study serve a monitoring function, providing useful information about student knowledge, attitudes, skills and behaviours at the regional level.

Below, we describe the key features of the process and impact evaluation. These components include the utilization of a logic model, a comprehensive approach to process evaluation, and a rigorous approach to outcome evaluation that employs quasi-experimental methodology.

Logic Model. The HFLE logic model provides a framework that links the key components of the intervention (in this case HFLE instruction that fosters interactive, skills-based learning) to key determinants of important behaviours, the behaviours themselves, and health goals. The logic model guiding the HFLE Common Curriculum follows:



The logic model guided the selection of evaluation activities and measures used for both the process and impact evaluation.

PROCESS EVALUATION

The process evaluation focuses on a set of interrelated tasks to document the fidelity of Common Curriculum implementation and identify challenges and successes in key areas including teacher preparation/training, student receptivity, and administrative support. This information was collected in order to identify areas for improving the Common Curriculum and its delivery and determining what, if any, additional content, resources, and materials might be needed.

This process evaluation included interviews with school administrators and HFLE Coordinators, periodic observations of teachers delivering the Common Curriculum units, and teacher and student unit feedback forms completed in the intervention schools after lessons were taught. Teachers were asked to provide feedback about what works and what needs to be improved. Information gathered from participants can serve to inform and improve the programme. Process data were collected by Country Coordinators and the UNICEF consultant, and sent to EDC for data entry and analysis. Frequencies were calculated on student and teacher quantitative assessments, and qualitative interview data were examined for common themes, identified challenges, barriers, and potential solutions. Findings were compiled and summarized in interim reports to UNICEF.

IMPACT EVALUTION

The impact evaluation employed a quasi-experimental pre-post matched pairs design to examine the impact of the Common Curriculum implementation of two HFLE units on students. The primary question addressed is: *Do students in intervention schools report more positive attitudes and norms, greater knowledge, more life skills, and fewer risky behaviours than students in their paired comparison schools?*

Two critical factors shaped the context in which this question was addressed. First, the Common Curriculum was designed to supplement --not supplant--other ongoing efforts in the region to train teachers on the HFLE Framework and support the delivery of life skills education. Thus, the evaluation compares “standard practices” that, in most schools, includes delivery of health education with the provision of “enhanced” Common Curriculum lessons. Second, this curriculum was developed in tandem with carrying out evaluation activities. That is, lessons were developed, revised, and refined, informed by the process evaluation. Teachers were trained and delivered lessons for the first time during the impact evaluation period, while they still were becoming familiar with both the content and pedagogy.

Methods

Country Coordinators and Ministries in Antigua, Barbados, Grenada and St. Lucia each identified three pairs of schools that were similar in terms of size, urban/rural location, academic performance, gender composition, and perceived student behavioural risk. All schools selected were willing and had the capacity to implement the intervention and evaluation procedures.

Schools in each of the 12 pairs were randomized to either the intervention or comparison condition and HFLE Coordinators and Ministry representatives were notified of randomization results in time for the Fall 2005 school year. Intervention schools began implementing the new HFLE Common Curriculum with all Form 1 students during the 2005–2006 school year. Form 2 was implemented during the 2006–2007 school year, and Form 3 was implemented during the 2007–2008 school year. Thus, the Common Curriculum was introduced in stages. Each year, teachers in the intervention schools were offered training on the new *Self and Interpersonal Relationships* and *Sexuality and Sexual Health* lessons.

In the comparison schools, students received standard HFLE or other health classes that were already part of the curriculum; this curriculum was often drawn from the HFLE Common Framework. However, it was assumed that comparison teachers would not have access to the

new lessons developed for the project, and would not receive special training in curriculum delivery and, especially, skills-based interactive learning activities. It was also assumed that the great majority of students in both intervention and comparison schools would remain in the same school from Form 1 through Form 3. Thus, students in intervention schools would receive multi-year exposure to the Common Curriculum, and there would be little cross-over of students between conditions.

During Fall 2005, Form 1 students in intervention and comparison schools were asked to complete an anonymous baseline survey of attitudes, norms, knowledge, and behaviours. Items on the student survey were drawn or adapted from instruments used previously with similarly aged students. Drafts were reviewed by Country Coordinators and piloted for reading level and length. Teachers also completed a brief survey at this time. Teachers were asked about their HFLE-related training and experience, as well as their plans for implementation and anticipated barriers and challenges. A follow up 1-month post-intervention survey was planned for all Form 3 students and teachers in spring 2008. (Unfortunately, difficulties completing lessons during the term prohibited a 1-month follow up prior to the end of school, so the impact evaluation is an immediate assessment following completion of lessons.) Items assessing life skills learned were added to student survey; life skills covered were added to the teacher survey. Neither students nor teachers were individually tracked. That is, all surveys were anonymous and did not contain any personal identifiers.

EDC provided Country Coordinators with an evaluation implementation manual that outlined procedures for collecting surveys from teachers and students. The manual provided information on procedures for informing parents about the study and collecting data from school administrators, teachers, and students. Specific instructions were provided for assuring confidentiality. Country Coordinators were responsible for organizing and overseeing data collection; completed forms were returned to EDC for data entry and analysis.

Analysis Plan

The analysis plan was designed to evaluate whether students enrolled in schools implementing the Common Curriculum reported greater knowledge, more positive health attitudes, greater life skills, and fewer risky behaviours. Because of the multi-year design, it was not possible to randomize individual students, teachers, or classrooms to intervention or comparison conditions. Therefore, schools were the unit of randomization, and analyses were conducted at the school level. The *a priori* design called for a paired school comparison of student outcomes by condition. This analysis considers whether there are significant differences across pairs of schools assigned to the intervention and comparison conditions. The design balances demands for rigor with practicality and resources. A matched pairs design was chosen in consideration of the relatively small number of schools participating in the study and the need to randomize within each of the four countries to assure even distribution within countries of the two conditions. This also helped control for potential differences across countries and increased the likelihood that intervention and comparison schools within a country would be similar at baseline. Further, the design took into account the fact that students were not individually tracked from baseline (Form 1) to follow up (Form 3), due to confidentiality concerns and the difficulties of such data collection. Therefore, baseline data from Student X cannot be linked with his/her outcome data, collected almost three years later.

Paired analyses were used to detect whether there is a consistent pattern on each outcome measure (i.e., positive or negative) that differentiated intervention from comparison schools. The Wilcoxon test for two related samples was used to assess significance, with a two-tailed p at $<.05$. Outcome measures included both single items (e.g., recent use of alcohol, recent sexual intercourse) and scales (e.g., attitudes supporting violent behaviours, HIV/AIDS knowledge) across the domains. Given the relatively small number of pairs overall ($n=12$), there is insufficient power to perform paired analyses within countries; many more schools in each country would be needed. Further, the random assignment of one pair was reversed and deleted from these impact analyses.

In addition to these paired analysis described above, we also conducted regression analyses at the school level, controlling for the baseline measure corresponding to the outcome (e.g., mean score or proportion reporting attitude or behaviour at Form 1 and Form 3). We examined the intercept as the indicator of intervention effect. These analyses controlled for potential differences within school pairs at baseline.

Results were cross-checked in several ways. We explored potential intervention effects using individual level data. Because individual students were not tracked over time, these bivariate and multivariate logistic and linear regression analyses could not control for baseline reports. However, they take do advantage of the large number of student participants, controlling for potential influences of gender, age, academic performance, and country, as measured at follow up. We conducted these analyses using student reports from the four countries combined and pair by pair. Because the matched pairs design with a small number of pairs is relatively conservative (that is, small effects are difficult to detect), the purpose of these additional analyses was to determine whether there were patterns of results suggesting intervention effects that were detected in our primary analyses.

In addition to providing data for the impact evaluation, student surveys were also used to provide Ministries with a “snapshot” of students’ knowledge, attitudes, life skills and behaviours at Form 1 and Form 3. Further, student surveys were used as a starting place to identify, with Ministries, items that could be included on a brief monitoring tool that can be used to identify emergent student health needs and help assess the success of regional and country health promotion efforts. An administrator tool was also developed to monitor implementation of HFLE dissemination.

IV. FINDINGS FROM PROCESS EVALUATION

In this section, we first summarize activities that were undertaken to develop the standardized Common Curriculum and train teachers. We then report on data from the process evaluation of implementation. These data come from multiple sources, including teachers, administrators, and students.

Implementation was monitored in multiple ways. First, in the intervention schools, quantitative unit assessments were collected from both students and teachers at five time points (twice in Form 1 after each unit; twice in Form 2 after each unit; once in Form 3 following the *Self and Interpersonal Relationships* unit). Teachers completed written surveys that asked their level of preparation/training, number of lessons taught, skills covered, appropriateness of material, and changes made or suggestions for the future. Students were asked about their past exposure to HFLE, their participation in classroom activities and homework assignments, skills learned, and appropriateness of the material. The numbers of participating students per assessment ranged from 714 to 1279; the numbers of participating teachers ranged from 12 to 17.

Second, periodic classroom observations in both intervention and comparison classrooms were conducted by the Country Coordinators and the HFLE Regional Coordinator, who also conducted end-of-year interviews with administrators. Due to resource constraints, fewer observations were held than originally planned. Observation checklists and interview protocols were prepared by EDC and included in the evaluation manual. Because the number of classroom lessons observed was small, a survey of comparison school teachers was conducted at the end of Form 2 to obtain additional information on what was being implemented and to help sustain administrator and teacher interest in the project.

Finally, baseline and follow up teacher surveys were conducted in both intervention and comparison schools. At baseline, 42 teachers completed the baseline survey, 22 from intervention schools and 20 from comparison schools. Eleven of the 12 intervention schools were represented and 10 of the 12 comparison schools. At follow up, fewer teachers (n=21) completed the survey, 13 from intervention schools and 8 from comparison schools. Eleven of the intervention schools were represented, but only 7 of the comparison schools. Several teachers, especially those from comparison schools, skipped questions. Thus, information is less complete at follow up, especially for comparison schools. Although the teacher sample is too small and unrepresentative for conducting statistical analyses, their responses add to understanding the process, success, and challenges of implementation.

CURRICULUM DEVELOPMENT

Beginning in Year 1, EDC worked with the Regional Coordinator, Country Coordinators and teachers to transform the HFLE Regional Curriculum Framework into scripted, interactive skills-based lessons. EDC moderated multiple meetings over the course of four years to draft outlines for lessons for two themes for Forms 1-3. The selection of themes was based on regional needs as determined by Country Coordinators and UNICEF. The first set of lessons focuses on *Self and Interpersonal Relationships*, and includes violence prevention. The second focuses on *Sexuality and Sexual Health*, and includes HIV/AIDS prevention. The HFLE Regional

Framework also includes two additional themes, one on *Eating and Fitness*, and the other on *Managing the Environment*. Given limited resources and time, a decision was made to restrict curriculum development as well as initial “core” implementation to the two themes: *Self and Interpersonal Relationships* and *Sexuality and Sexual Health*.

Unit content was developed based on the latest research in the area and the HFLE Regional Curriculum Framework. EDC facilitated the curriculum development process. A curriculum development team, comprised of the Regional Consultant, the four Country Coordinators, representatives from CARICOM and UNICEF and teachers worked to develop lessons. For Form 1, 18 lessons were initially prepared for the *Self and Interpersonal Relationships* unit and 22 lessons were completed for *Sexuality and Sexual Health* unit. The number of lessons and the learning activities within each lesson were guided by in-country assessments of what was developmentally appropriate and what Country Coordinators thought was possible to cover during the available time during school year. This process was repeated for lessons for Form 2 and 3. Indeed, at the outset, it was assumed that these two themes could be completed, leaving time for additional lessons addressing the themes of *Eating and Fitness* and *Managing the Environment*. The multi-year curriculum was intended to “spiral,” building on previous lessons by adding developmentally-appropriate topics and skill areas as students progressed from Form 1 to Form 3.

Given this was the first time that the curriculum and lessons were being implemented, input on the challenges and successes of classroom delivery were invaluable in informing mid-stream refinements. For example, based on the initial feedback from teachers and observations by the Country and Regional Coordinators during Year 1, it became apparent that less classroom teaching time was available than initially assumed. Therefore, the number of lessons in each unit was reduced and the activities were substantially pared back in a major revision. A set of 10 shorter, “core” lessons for *Self and Interpersonal Relationships* were identified, along with 7 lessons for *Sexuality and Sexual Health*. Based on the Year 1 experience, 10 lessons per theme were subsequently developed for Forms 2 and 3. Some content originally developed for Form 1 was moved into the Form 2 lessons. At the end of each school year, input from teachers and Country Coordinators was incorporated into a final, revised package of lessons available for dissemination.

TRAINING

During Year 1, a regional five-day training of trainers was conducted with teams from the pilot countries as well as other countries across the Caribbean. Representatives came from Antigua, Barbuda, Barbados, Belize, British Virgin Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tabago. The event was co-led by UNICEF, CARICOM, and EDC facilitators. The purpose was to prepare a small cadre in each country to deliver in-country training.

Following the training of trainers, multi-day trainings were scheduled in each country to prepare teachers to implement the new curriculum. Trainings were led by Country Coordinators; UNICEF and EDC staff attended selected days of training; they observed what was covered and learned about how teachers were selected, what HFLE experience they had, and their other course assignments. As summarized in a report to UNICEF, teachers overall were very

enthusiastic about being part of the project. Most said they were comfortable with the unit content. However, as illustrated in the box below, during this initial year of training on Form 1, coordinators and observers noted that teachers across countries would benefit from a more structured training, given their relative inexperience both with the health content of lessons and the pedagogy. Few teachers had previously led interactive skills-based activities; many had little classroom experience, and some were young, first time recruits. They, too, expressed that additional training would be welcome.

Coordinator/Observer Feedback on Form 1 In-Country Teacher Training

“More time was needed for the topics so that teachers could absorb and internalize the content, which was new in many cases.”

“Teachers needed more in-depth training in delivering lessons by the skills method. There were deficiencies in knowledge/content also. Some are not familiar with some of the content.”

“The training time was a bit short, but the participants accomplished more than expected. There was a request for practicing more sexuality lessons, but there was not enough time.”

“Teachers gave good evaluations of the training, and wished there was more time. They recognized the need to match the students’ development and not treat them as ‘babies’, especially since some students would reach the legal age of consent to participate in sexual activity.”

Across countries, it was noted that there was considerable inconsistency in content of training and, perhaps most critically, individual lessons were not covered or practiced in any detail. To address issues that arose during the initial training year, a training manual was created for the beginning of Year 2 in order to help assure that teachers were prepared similarly across countries and provided with more in-depth training on the delivery of lessons and exercises. This training manual is provided in the Appendices. To respond to teacher training issues, Coordinators also offered onsite training and technical assistance with lesson delivery over the course of the school year, although their time availability for this activity was often limited.

Despite the addition of the manual, several training issues still were apparent during teacher preparation for Form 2 and Form 3. As one Coordinator commented: *“The teachers felt that more time was needed. They were not accustomed to modifying their teaching approaches, strategies and delivery to match the changes in child development (particularly mid-adolescence) in secondary school. They usually focus on curriculum content. Practice delivery was most appreciated.”* Teachers and trainers both noted that practice in leading participatory exercises is especially needed, since *“These methods are not seen in regular classrooms.”*

Throughout the three years of implementation, teachers in the intervention schools were not necessarily selected in time to receive training. Second, there was substantial teacher turnover, meaning that each year some new teachers had to be trained. Trainings had to accommodate the needs of both new and experienced teachers. Third, training on

delivery of individual lessons often was not provided. In addition, in some schools, there was teacher turnover during the course of the year, resulting in several untrained teachers assuming HFLE classroom responsibilities. Interviews with Country Coordinators and the Regional Consultant consistently raised concerns about the priority of HFLE in both teacher assignment and class time allocation.

Despite these challenges, most teachers tried to implement the lessons. An additional challenge faced in one country—St. Lucia—was the retirement of the Country Coordinator by Form 3. Although a replacement was designated, this was not her sole responsibility. As a result, some activities, including training and technical assistance, were not completed during the final study year.

LESSON IMPLEMENTATION

As discussed above, based on interviews and observations of lessons, during Year 1, it became readily apparent not only that teachers could not implement the original full set of 18-22 lessons per unit. They also had trouble completing the pared down “core” lessons for each unit. In addition, within lessons, activities were at times omitted due to time constraints; some lessons were spread over multiple periods. Disruptions to class periods assigned to HFLE were also documented. These implementation problems persisted in Forms 2 and 3. However, despite difficulties implementing all lessons as intended, as illustrated in the box below, teachers and students were enthusiastic about the curriculum throughout the study.

Teacher Unit Assessments: Common Curriculum Training and Implementation

Overall, teachers and students reported positive experiences each year. For example, on each of the unit assessments, a majority of the teachers would be “very likely” to recommend the lessons to their peers. (However, Form 1 teachers completing surveys were somewhat more likely to say they would recommend the lessons than Form 2 and Form 3 teachers). In addition, most teachers felt that the lessons would have a “moderate” or “large” impact on students. Consistently, students as well as most teachers thought the lessons were at the right level and culturally appropriate. Teachers thought the students were very engaged in most lessons, and students reported being involved and most reported their homework was useful. (Summaries of unit assessments have been submitted to UNICEF in regular reports.) Teacher surveys also indicate that over the project period, the proportion of teachers in the Common Curriculum schools who report they have experience teaching HFLE increases.

Examples of Teacher Comments on the Common Curriculum

“The evident enthusiasm of the children was delightful. Students actually looked forward to having the session.”

“The children appreciated learning more about the changes they were experiencing and what they could do to deal with these changes.”

“All the lessons are necessary because our students are faced with many sexual pressures daily.”

“Students are really trying to implement skills learned.”

"[HFLE allows] students to formulate their own opinions and express them in a safe environment."

"I enjoyed seeing the students come alive with authentic pedagogy as opposed to textbook information that is dry and boring."

Overall, teachers reported that students were engaged in activities and learned new things; most felt that the lessons were developmentally and culturally appropriate and covered important topics. However, only a minority thought the lessons fit the teaching time: *"My greatest problem was trying to fit everything into a 40-minute class period. However, I have been getting better at it over the past few months."* Observations of classroom delivery by the HFLE Regional and Country Coordinators confirmed teacher reports that the lessons were, for the most part, enthusiastically received by students.

Examples of Coordinator Observations of Classroom Delivery

"The worksheets, role play were very suitable, and the language was at an appropriate level. The children enjoyed the lessons and were very exuberant."

"Two very good lessons were observed in the Sexuality and Sexual Health theme. One on abstinence and one on puberty. Both teacher and students were energized, and students demonstrated commitment to choosing abstinence."

"Skill practice was evident in all the intervention schools and generated much interest and excitement. Skits on 'saying No' was one of the outstanding lessons. The portfolios were very good."

"This lesson was on friendships; children participated well and wanted to continue after the session was due to end. It was very exciting to watch all the activity."

"The lesson on 'use of cell phones' was also very successful. The students demonstrated their knowledge of the skill using the scenario but more important were their attitudes and opinions on cell phone availability, use and misuse, and the rules they believe should be put in place. They then utilized critical thinking and highlighted a number of other issues which are arising from the existence of cell phones: peer pressure to have the latest and more expensive, envy and conflict, stealing, bullying, breakup of friendships because of gossip, inappropriate ways of acquiring the phones or the money to do so. The discussion was spirited, but focused. The continuing activity was for them to write letters to authorities on the topic of whether cell phones should be allowed in schools."

"The lesson plans were very detailed and properly constructed. The objectives were achievable."

"I enjoyed the class discussions as it helped me to understand students' reasoning and ways of thinking."

The observers also noted some difficulties. Some of these related to time management of the lessons. For example, in one classroom it was noted that *“The Self and Interpersonal lessons had some areas which went a bit slowly and concepts were a bit abstract for some students. Almost two terms were spent on this theme. The Sexuality and Sexual Health lessons were very appealing to the students but had to be rushed because of a late starting date.”* Several others commented that the lessons overall went *“fairly well”* but implementation success was *“mixed.”*

One issue is that the intended spiralling of the units sometimes made the content seem repetitious, even if the activities to promote skills-building were different. This is an issue that can be addressed through refinements as well as in teacher training that highlights the progression of lessons as students get older. Training is also important to address classroom management issues that teachers faced, including *“trying to work along with students who were a little too immature”*; *“students who were disruptive and not interested in learning about topics that will in some way impact their lives”*; and *“students sometimes excess-talking because of excitement.”*

Despite the reduction to 10 lessons per unit for Forms 2 and 3, there continued to be substantial difficulty with completion. Consistent with observations and interviews by the Regional and Country Coordinators, by the final unit assessment, about half the teachers reported completing most or all of lessons 7-9, and only a third completed lesson 10. Teachers continued to have problems with scheduling HFLE class time and disruptions. Despite extending the time allocated for these two units each year, completion remained problematic. Only 20-35% of teachers said the lessons fit the teaching time allocated to HFLE throughout the study. This clearly presents challenges for interpreting findings from the impact evaluation. In addition, it raises issues about whether sufficient time is allocated for HFLE (or can be) to cover the additional content of the HFLE Regional Curriculum Framework, e.g., *Eating and Fitness* and *Managing the Environment*.

Potentially related to ongoing implementation issues, the proportion of teachers who reported getting four or more days of training appears to have declined over time (from 50% in Form 1 to 9% in Form 3). One reason may be that Coordinators felt that teachers were better prepared as the study went on; however, the proportion of teachers reporting they got enough training fluctuated between 45% and 60%. Interestingly, although Coordinators reported that most teachers had little HFLE training when they were recruited at the beginning of each year, by Form 3, many of the teachers who completed the assessments said they had three or more years teaching HFLE.

Comparison Schools: Documentation of “Standard Practices”

At baseline, teacher surveys were collected from comparison schools along with student baseline surveys. At the end of Form 2, to keep comparison schools engaged, teachers were asked to complete a brief questionnaire on their teaching and health education experience, teaching methods, topics and life skills they taught. As part of the process evaluation, we also attempted to collect information on health classes being taught at the comparison schools. Unfortunately, resources limited collection of annual information to the intervention schools only, so similar information is not available from comparison schools across all four countries. That is, there is

limited documentation of what “dosage” HFLE students in comparison classrooms, schools, and countries received.

In all countries, there are some requirements to address content covered in HFLE, at least in Forms 1 and 2. As illustrated in the box below, throughout the study, the HFLE Regional and Country Coordinators said similar topics were taught in the comparison schools but consistently reported that teachers in the comparison had less training in health/HFLE and used fewer skills-building interactive activities in their classroom lessons.

Coordinator Comments on HFLE in Comparison Classrooms

“The comparison schools addressed some of the same topics such as puberty and HIV/AIDS. However, the skills practice was not a component. The lessons were mainly lecture and discussion.”

“There were similar lessons or rather lessons dealing with similar topics. However, they were more knowledge based and did not focus on demonstrating the life skills. This was so for both themes.”

“Some of the topics are similar, but a great portion of the programme was assigned to career guidance. The lessons include some skills but these are not delivered as skill learning as in the common lessons.”

“Some similar topics are being done in these schools but the focus is more on cognitive skills of reasoning and rationalisation. The lessons are mostly teacher directed with little student participation in activities.”

As discussed in Section VI (Impact Evaluation), in their baseline and follow up surveys, students in comparison schools, like those in the Common Curriculum schools, provided information on the health lessons they received.

TEACHER SURVEYS AT BASELINE AND FOLLOW UP: CUMULATIVE EXPERIENCES

At baseline, 42 teacher completed surveys, 22 from intervention schools and 20 from comparison schools. Fewer teachers (n=21) completed surveys at follow up and fewer comparison schools are represented.

Teacher Experience and Training on HFLE

Confirming observations of Country Coordinators, at baseline a sizeable proportion of teachers reported relatively little teaching experience or training in HFLE; however, lack of preparation was especially notable in intervention schools. Intervention school teachers were:

- Twice as likely to report less than one year’s experience teaching HFLE (46% vs. 24% of comparison school teachers);
- Less likely to report 6 six or more years of teaching experience in general (55% vs. 72% of comparison school teachers);

- Less likely to report taking health education classes while training to become a teacher (24% vs. 53% of comparison school teachers); and
- More likely to report a day or less of continuing education training on HFLE (45% vs. 18% of comparison school teachers).

By the end of the study, fewer teachers in both intervention and comparison schools reported being novices at teaching HFLE. In contrast to baseline reports, however, Form 3 teachers in intervention schools reported more days of continuing education training in HFLE, while respondents in comparison schools reported less. At follow up over 90% of teachers in both intervention and comparison schools wanted additional training on HFLE.

Preparedness and Comfort Levels

Teachers were asked to rate their overall level of preparation to teach HFLE as well as how prepared and how comfortable they were teaching specific topics. Consistent with their more limited teaching experience, at baseline intervention school teachers were less likely to say their level of preparation was “very good” or “excellent” (40% of intervention school teachers vs. 82% of comparison school teachers). They were also somewhat less likely to feel prepared to teach topics related to self and interpersonal relationships, sexuality and sexual health, and alcohol and substance abuse, and somewhat more likely to feel prepared to teach the less sensitive themes of environment, nutrition and exercise. By contrast, at follow up teachers in intervention schools (67%) were more likely than comparison school teachers (20%) to report their level of preparation as “very good” “or excellent”. Intervention school teachers were more likely to report feeling “mostly” or “very” prepared to teach the content of HFLE at follow up.

	Follow Up	
	Comparison	Common Curriculum
Adolescent growth & development	38%	69%
Self-concept	38%	62%
Healthy relationships	25%	69%
Violence prevention	25%	69%
Sexuality & sexual health	50%	77%
HIV prevention	12%	69%
Alcohol and other substance use	12%	69%
Environment	25%	39%
Nutrition & exercise	12%	46%
Personal living & household management	0%	38%

A similar pattern occurs for reports of being “very comfortable” teaching these topics.

	Follow Up	
	Comparison	Common Curriculum
Adolescent growth & development	38%	69%
Self-concept	38%	54%
Healthy relationships	38%	54%
Violence prevention	12%	69%
Sexuality & sexual health	25%	54%
HIV prevention	12%	46%
Alcohol and other substance use	25%	69%
Environment	12%	23%
Nutrition & exercise	38%	38%
Personal living & household management	12%	23%

Teaching Methods

The Common Curriculum emphasizes the use of interactive teaching methods, and these were reinforced in training held by the Coordinators. To assess teaching intentions at the outset of the study, Form 1 teachers were asked how often they planned to use different teaching methods in their HFLE classes. At the end of the study, Form 3 teachers were asked how often they actually used these methods. At baseline and especially follow up, teachers in intervention schools reported planning to use or using more interactive methods.

	Follow Up	
	Comparison	Common Curriculum
Lecturing	25%	15%
Classroom discussions	50%	85%
Written exercises	12%	38%
Role plays	0%	54%
Games	0%	15%
Surveys, other data collection	0%	15%
Use of media	25%	31%
Brainstorming	38%	62%
Small group activities	25%	58%
Story telling	12%	54%
Case studies/real life scenarios	38%	54%

Lessons Devoted to Common Curriculum Topics and Coverage of Skills

At the outset of the study, Form 1 teachers were asked to estimate how many lessons they would devote to topics stressed by the Common Curriculum. At the end of the study, Form 3 teachers were asked how they had allocated lesson time. At baseline intervention school teachers estimated that they would allocate more classes per topic than comparison school teachers, perhaps reflecting their greater inexperience and lack of appreciation of timetable constraints. At follow up, there was no common pattern; intervention school teachers taught more of one topic (e.g., HIV prevention) and comparison school teachers more of another (e.g., sexuality and sexual health).

At follow up, teachers were asked to what extent they covered a range of life skills. (Skills questions were not asked at baseline.) In general, intervention school teachers were somewhat more likely to indicate they had “mostly” or “fully” covered the skills, a perception not reflected in students’ attitudinal and behavioural self reports.

	Follow Up	
	Comparison	Common Curriculum
Self awareness	50%	77%
Decision making	63%	69%
Critical thinking	38%	54%
Refusal skills	50%	54%
Time management skills	25%	31%
Study skills	25%	31%
Healthy self management	50%	46%
Social awareness	50%	62%
Embracing diversity	50%	84%
Goal setting	32%	46%
Assertiveness skills	25%	62%
Coping skills	38%	62%
Interpersonal relationship skills	62%	69%
Household management skills	0%	31%
Help seeking skills	25%	54%
Advocacy skills	12%	38%
Creative thinking	25%	54%
Problem solving	38%	54%

Endorsement of HFLE and Barriers to HFLE implementation

Teachers who were involved in the implementation of the Common Curriculum register higher levels of commitment to HFLE:

- At baseline, about one third of both intervention and comparison school teachers said that HFLE is “more important” than other core subjects. At follow up, nearly 60% of intervention school teachers, but less than 20% of comparison school teachers, said HFLE was more important than other subjects.

- When asked at baseline whether HFLE provides students with the knowledge and skills they need to stay healthy, intervention school teachers were less likely than comparison school teachers to say “yes, very much”. There was little change in the proportion of comparison school teachers saying “yes, very much” at follow up; however, the proportion of intervention school teachers saying yes increased.

The greatest barrier noted by teachers in both conditions was inadequate or insufficient materials, followed by insufficient time to cover lesson content. One notable difference in barriers noted by intervention and comparison teachers is perceived administrative support. At baseline, about one quarter of intervention teachers reported this as a moderate or large barrier; by follow up, only 8% did so (compared with a quarter of comparison teachers).

	Baseline		Follow Up	
	Comparison	Common Curriculum	Comparison	Common Curriculum
Lack of student interest	15%	23%	37%	30%
Lack of administrative support/encouragement	15%	23%	25%	8%
Inadequate/insufficient materials	55%	68%	63%	53%
Difficulty maintaining classroom discipline/order	10%	22%	25%	31%
Insufficient time to cover material	35%	50%	50%	38%
Controversial nature of topics/activities	10%	14%	0%	0%
Training in HFLE	n/a	n/a	25%	23%

In sum, during Form 1, teachers from intervention schools reported being less experienced, less well trained and prepared to teach HFLE, and less comfortable with the material. By Form 3, this pattern appears to reverse, with Form 3 teachers from intervention schools more likely to say they had received several days of training, were prepared to teach and comfortable teaching some of the more sensitive HFLE topics, and had mostly or fully covered HFLE skills. Obviously, limitations of the data – small sample sizes and inadequate representation of comparison schools especially at follow up – are cause for caution; none of the “findings” is “statistically significant.” Thus, the introduction of the Common Curriculum may have nudged forward goals to promote HFLE and build a work force that is better prepared to take on the curriculum. However, problems with fidelity and full implementation clearly remain, and need to be considered in planning future teacher training and dissemination.

V. MONITORING STUDENT HEALTH INDICATORS

During fall 2005, 2364 Form 1 students attending intervention and comparison schools in the four participating countries (Antigua, Barbados, Grenada, and St. Lucia) completed the baseline survey. During June 2008, follow up surveys were administered to Form 3 students in each country. At each time, all students attending classes were surveyed to provide a “snapshot” of student attitudes and behaviours. The surveys were conducted anonymously to protect student confidentiality. Below, we provide summary information from the four countries combined at both baseline and follow up. Appendices contain frequency reports for individual items for the four countries combined and for each country separately.

Country	Number of Eligible Students	Number of Participating Students	Response Rate By Country
Antigua	340	299	88%
Barbados	850	698	82%
Grenada	698	525	75%
St. Lucia	912	842	92%
TOTAL SAMPLE	2800	2364	84%

Country	Number of Eligible Students	Number of Participating Students	Response Rate by Country
Antigua	162	135	83%
Barbados	862	488	57%
Grenada	764	583	76%
St. Lucia	991*	703	71%
TOTAL	2779	1909	69%

* Based on 2006-07 estimate

Note on Sample:

There was a decrease in the number of participating students in three of the four countries from Form 1 to Form 3, and a slight increase in Grenada. Thus, the student composition in the combined four country report is somewhat different at these two times.

SURVEY HIGHLIGHTS – FOUR COUNTRIES COMBINED

Average Age at Form 1 Survey: 12.0 years

Average Age at Form 3 Survey: 14.7 years

Percentage Male at Form 1: 49%

Percentage Male at Form 3: 46%

As youth progress from early through mid-adolescence, their attitudes about school may change and their risk behaviors typically increase. Below are highlights from Form 1 and Form 3 student self-reports.

Attachment to School

- At Form 1, almost all boys and girls (90%) reported liking school and being happy there. By Form 3, students overall continue to report positive school experiences, with 80-85% of youth reporting they feel like they are a part of their school and happy there.
- At Form 1, the majority of students felt there was an adult at school they could go to if they needed help with a problem (79%) and that there were teachers at school who cared about them (84%). By Form 3, a smaller proportion of students (59%) report there is a teacher they could go to for help with a personal problem.
- About 12% of Form 3 students say they missed five or more days of school in the last month; this is an increase from Form 1. At Form 3, 17% report they have a paid job (with most of those working putting in less than 10 hours/week).

Substance Use

- When asked early in Form 1, about two-thirds of students reported having had more than a sip or two of alcohol and 17% had been drunk at least once. By the end of Form 3, 88% of students say they have had alcohol and over twice as many now report (40%) having been drunk at least once. In addition, the gender gap narrows. In Form 1, boys were twice as likely as girls to report having been drunk. By Form 3, a third of females and just under half of males (48%) say they had been drunk at least once.
- During Form 1, about one in ten students reported they had smoked cigarettes and marijuana at least once. Boys were three times more likely to report these behaviors than girls. By Form 3, 23% of students report having tried cigarettes and 28% have tried marijuana. Males are twice as likely to say they have tried marijuana (39%) as girls (20%), and also more likely to have smoked cigarettes (27% males; 19% females).
- In Form 3, students were also asked about their recent use of substances. Over half (55%) of students say they have had more than a sip of alcohol in the last month, and 10% report having alcohol more than 10 times during this period. In addition, 19% say they recently have been drunk, 15% have used marijuana, 10% have used inhalants, 8% have used cigarettes, and 4% have used steroids or other drugs. While there are gender differences, females as well as males are involved in substance use. For example, 53% of females and 58% of males report recent drinking and 16% of females and 22% of males report being drunk in the last month. Females are less likely to report recent marijuana use (10%) than males (21%).
- At Form 1, about half of the students believed that teenagers cause themselves great harm by drinking alcohol once a week or more; two thirds believed this is the case for marijuana. These numbers remain fairly consistent through Form 3, where 54% report great harm from cigarettes and 62% great harm from marijuana.

- At both Form 1 and Form 3, females are more likely than males to report they could say no if peers wanted them to drink alcohol, smoke cigarettes, or use marijuana.

Violence

- In Form 1, half of the boys and a quarter of the girls reported being in a physical fight in the past month. Physical fights are defined as fights with hitting, kicking, and pushing. About 8% said they have carried a weapon (knife, razor, ice pick or gun) to school. In Form 3, fighting continues to be an issue for both males and females. One third (31%) of students report that most boys their age fight at least weekly, and 18% report most girls are involved in physical fights this frequently.
- In Form 3, some attitudes continue to promote fighting: 70% of students agree that “you will be called a coward if you back down from a fight.” About half (47%) of females and 59% of males agree that a boy “who refuses to fight loses respect”; somewhat smaller percentages females (39%) and males (51%) agree this is the case for girls.
- As with other refusal skills, in both Form 1 and Form 3, girls are more likely to report they could say no to peer pressure to get into a fight or carry a weapon. However, the difference is relatively small on such items as not getting into a fight if someone is “pushing you around.” For example, in Form 3, only a third of females and 28% of males say they could refuse getting into a fight under these circumstances.

Sexual Risk-Taking

- At Form 1, 38% of boys and 6% of girls reported that they have had sex or “gone all the way.” By Form 3, the largest jump is among girls: 28% of females say they have had sex, along with 60% of boys. Overall, at Form 3, 22% of students report recent (last month) sex, or 16% of females and 28% of males.
- At Form 1, among students who report having had sex, two-thirds did not use a condom all the time; at Form 3, this figure is 69%. About two-thirds (63%) of those who report recent sex did not use a condom one or more times; this figure is somewhat higher for males than females (65% and 59%, respectively).
- At Form 1, most sexually initiated students said they had sex for the first time with someone their own age. During Form 3, the majority (65%) of females who had initiated sex say their first partner was someone older; by contrast, about half (51%) of males say their first partner was someone their own age.
- At Form 1, forced sex was reported by 14% of all students. At Form 3, 18% report a forced sexual experience (21% of females; 15% of males).
- Form 1 girls were more likely to feel they can refuse sex than boys. At Form 3, 67% of females, compared to 25% of males, report they were “very sure” they could refuse

sex with someone they like very much, and 88% of females and 56% of boys report they could “say no” to an older person who gave them gifts or money.

HIV-AIDS Knowledge and Stigma

- Between Form 1 and Form 3, students show increases in knowledge about HIV-AIDS. For example, during Form 1, less than half knew that people can have the HIV virus but not show signs of being sick right away, and a third did not know that a person can get HIV by having sex just once without a condom. By Form 3, 72% of students answer the first item correctly, and 81% answer the second item correctly.
- There also appear to be some reductions in HIV-AIDS related stigma. In Form 1, less than a third of students felt a teacher or student who has the AIDS virus should be allowed to teach or attend school, and only half said they would be willing to remain friends with someone with the AIDS virus. Approximately three-quarters said they would not buy food from a shopkeeper or food seller with the AIDS virus. As assessed during Form 3, about half feel that a teacher or student with the AIDS virus should be allowed to attend school, and 67% report they would remain friends with someone with the AIDS virus. However, 60% would still not buy food from a shopkeeper with the virus.

VI. FINDINGS FROM IMPACT EVALUATION

[HFLE] “teaches you about life and mostly about yourself and it teaches you how to handle situations which may occur in life.” Form 2 Student

As described in Section III, the primary impact analyses used data from Form 3 student follow up surveys. During Spring 2008, follow up data were collected from 1909 Form 3 students. Primary paired analyses were conducted on a total of 1598 youth from 22 schools (this excludes the one pair in which randomization was reversed).

As expected, many of the risk behaviours reported by students increased from Form 1 to Form 3 (see Section V). Planned analyses, comparing matched pairs of schools, reveal no pattern of significant positive effects of the HFLE Common Curriculum on Form 3 students' self-reported attitudes, behaviours, and skills in the health domains related to the themes of *Self and Interpersonal Relationships* and *Sexuality and Sexual Health*. It is important to note that there are no significant negative effects either, and there certainly may be benefits that were not assessed. In addition, it is important to remember that the impact evaluation was conducted simultaneously with the initial roll-out of new lessons that had not been piloted. As teachers gain experience with the refined lessons, and as implementation barriers are overcome, the benefits for students are likely to increase.

The impact evaluation examined a range of outcomes: peer norms, attitudes, and refusal skills related to substance use, violence, and sex; lifetime and recent reports of risk behaviors (e.g., alcohol, cigarette, marijuana, steroid, and inhalant use; sexual intercourse, forced sex, and unprotected sex); HIV/AIDS related knowledge and stigma; and self-reported life skills related to interpersonal relationships, sexual relationships, help-seeking from adults. Unfortunately, there is no consistent pattern of positive effects.

In addition to doing planned analyses, we also conducted regression analyses for the combined, four-country data, comparing students attending schools assigned to the intervention (Common Curriculum) or comparison condition. These analyses controlled for gender, age of students, academic performance, and country. These findings are consistent with the matched pairs results. Given the large number of comparisons, a few statistically significant results are expected by chance. In only a handful of cases did findings approach or reach statistical significance; however, negative findings counterbalanced positive (e.g., students in intervention schools reported lower peer norms regarding fighting but higher pro-violent attitudes).

FORM 3 STUDENTS IN COMMON CURRICULUM AND COMPARISON SCHOOLS: DESCRIPTIVE FINDINGS AND RESULTS OF PAIRED ANALYSES

The following section provides a descriptive account of what students in the two conditions reported in response to survey items. First, we consider sample characteristics and students' reports of HFLE classes. We then move to life skills and the main health domains addressed by the Common Curriculum units: substance use, violence, and sexual risk taking. A final section contains information on responses to items assessing HIV/AIDS stigma and HIV/AIDS knowledge. Each section also incorporates findings from the planned paired analyses. Taken together, these results support the conclusion that there is no consistent pattern of positive—or

negative—findings to support the hypothesis that Form 3 students attending schools assigned to the Common Curriculum report more health-promoting skills, attitudes, knowledge, and behaviours than students attending schools assigned to the comparison condition.

Sample Characteristics and Students’ Reports of HFLE Classes

As shown on Table 1, there are several significant differences between students by condition.¹ Students attending intervention schools are somewhat younger than those in comparison schools; they are also more likely to report their grades are “good” or “excellent” (as compared to poor or fair).² However, they are more likely to say they missed one or more days of school in the last month.

Item	Total	Comparison	Common Curriculum	P value
Gender (female)	54%	52%	56%	ns
Age (15 years or older)	52%	55%	48%	<.01
Work during school year	17%	16%	18%	ns
Grades good-excellent	63%	60%	66%	<.01
No missed days of school	43%	48%	39%	<.001

Not shown, in separate analyses by gender, age and reports of grade differences are significant only among females: for example, 54% of girls in the comparison schools are 15 years or older, compared to 42% in the intervention schools ($p < .01$). This is important to consider in interpreting findings, since involvement in many risk behaviors (e.g., most substance use, sexual intercourse) typically increases with age. That is, as a group, the older females in the comparison schools might be expected to report higher levels of risk than those in intervention schools; some differences may thus be age-related and not primarily attributable to condition.

Efforts to adopt the Common Curriculum have resulted in the intervention schools delivering more HFLE lessons. Table 2 shows that students in the intervention schools are more likely to report having HFLE classes both during the current school year and in prior years. In addition, among those who say they had HFLE classes, students in the intervention schools are more likely to report they received two or more classes per week.

Counter to expectations, however, only about 60% of students said they had attended the same school in a previous year. This makes it difficult to assess the level of exposure to the Common Curriculum or other HFLE lessons in prior Forms; that is, to answer the questions: What proportion of Form 3 students in the comparison schools were exposed to some Common Curriculum lessons in Form 1 or Form 2, or what proportion of Form 3 students did not receive a full, three-year “dose” of the intervention? Despite this limitation, however, there is a significant

¹ Descriptive analyses include all students who attended study schools so as to represent all data collected. Paired analyses exclude the one pair in which randomization was broken. Descriptive analyses were also conducted excluding students from this pair of schools; whether these students are included or excluded does not alter the pattern of results.

² Given the large number of comparisons examined, we use a modified Bonferroni correction and report as significant p values $< .01$.

difference in HFLE exposure: Virtually all students in the intervention schools (96%) reported they had HFLE in prior years, compared to 81% of those in the comparison schools.

Item	Total	Comparison	Common Curriculum	P value
Had HFLE before this year	89%	81%	96%	<.001
HFLE class this year	84%	69%	96%	<.001
Two or more HFLE classes per week*	43%	40%	46%	<.01
Attended same school in prior year	59%	54%	64%	<.001
Attended same school Form 1	84%	83%	86%	ns

*among those getting HFLE classes

Student Reports of Life Skills

Students were asked a set of 24 questions assessing the extent to which they perceive they can apply life skills highlighted in the Common Curriculum units. Each item was assessed on a 4-point scale, with response categories ranging from disagree strongly to agree strongly. In addition to considering individual items, a summative life skills scale was created. Because females report significantly higher levels of life skills, results in Table 3 are provided by gender. As shown, despite differences by gender, scores on the life skills scale is similar for youth in the two conditions (mean=72.7 for males and 77.8 for females). Note there are no significant differences on any of the 48 individual items. Indeed, there are only two items that even approach significance, and only among females (understand other people's ideas and perspectives; always treat others with respect, even if they are different).

	MALES		FEMALES	
	Comparison	Common Curriculum	Comparison	Common Curriculum
Life Skills Scale Mean Score	72.7	72.7	77.3	78.0
Individual Items:				
In school learned I can disagree with what others say	3.11	3.10	3.18	3.28
In school learned I can help my community by what I do	3.22	3.20	3.31	3.32
Set positive and realistic goals	3.29	3.22	3.41	3.45
Thought hard about values and what is important to me	3.24	3.26	3.44	3.45
Try to get know myself better	3.23	3.28	3.40	3.45
Aware of my feelings and how they influence what I do	3.19	3.21	3.32	3.38
Think about consequences before acting	2.92	2.86	2.91	2.90
Remember my way isn't only way	3.06	3.00	3.03	3.09
Try to understand other people's ideas and perspectives	3.01	3.03	3.07	3.17

Always treat others with respect even if different	2.94	3.00	2.99	3.11
Always treat others with respect even if I am angry	2.60	2.64	2.54	2.63
If someone is being teased or bullied I take positive action to stop it	2.76	2.76	2.95	2.84
Encourage peers to wait to have sex	2.43	2.41	3.21	3.25
Do not pressure anyone to have sex or do anything sexual	2.93	2.88	3.44	3.43
Protect myself from HIV/AIDS or other STIs	3.38	3.36	3.62	3.63
Don't let friends talk me into doing things I do not want to	3.26	3.18	3.44	3.50
Have friends to go if I need help with problem	2.92	2.89	3.11	3.19
Adult at school to go to if having personal problem	2.56	2.67	2.67	2.69
If adult or someone older wants me to do something sexual I know where to get help	2.99	2.92	3.31	3.33
Suggest activities that will not lead to something sexual	2.72	2.82	3.22	3.29
Find ways to have fun that do not lead to drinking or sex	2.91	2.92	3.32	3.42
Teachers at school who care about me	2.94	2.87	3.07	3.04
Remember goals when things get tough	3.09	3.07	3.14	3.13
Work hard and get what I want	3.46	3.47	3.64	3.65

In addition to the above skills, 8 questions specifically addressed refusal skills, as shown in Table 4. Again, females score higher than males, and there is only one significant difference by condition. Females in the intervention schools are somewhat more likely to report they can say no to using alcohol when pressured by peers. At a trend level ($p < .05$), females in the intervention schools report slightly higher refusal skills, especially with regard to substance use (but not sexuality). However, this finding does not hold once age is adjusted.

	MALES		FEMALES	
	Comparison	Common Curriculum	Comparison	Common Curriculum
Refusal Skills Scale	17.85	18.08	19.40	19.90
Individual items, Can say no to:				
Alcohol	3.12	3.18	3.24	3.43*
Marijuana	3.24	3.37	3.51	3.65
Cigarettes	3.28	3.50	3.57	3.69
Sex with a person you really like	2.20	2.22	3.38	3.37
Sex with older person gifts/money	3.02	2.91	3.70	3.74
Peer pressure to fight	2.93	3.00	3.21	3.36
Peer pressure to carry weapon	3.34	3.32	3.59	3.69
Fight if someone pushes you around	2.29	3.25	2.48	2.60

* $p < .01$ among females; however, not significant when adjusted for age

Scales of life skills and refusal skills were examined as outcomes in planned paired analyses. Consistent with the above results, there were no significant differences by condition.

Substance Use, Violence, and Sexual Risk-Taking

The next set of tables presents student reports of substance use norms, attitudes and behaviours by condition. Table 5 provides student reports of substance use norms and attitudes. There are only marginal ($p < .05$) differences on two items; however, these are in opposing directions and influenced by gender and age differences in the sample. For example, 41% of males and 55% females in comparison schools say that drinking alcohol can result in “great harm” to youth their age; fewer students (35% of males and 50% of females) in the intervention schools perceive this high level of harm. Although students in the intervention schools are somewhat less likely to report that females their age have ever smoked marijuana, there is no difference in perceived norms regarding how many girls smoke weekly. Overall, most striking is the similarity of student reports across the two conditions.

Item	Total	Comparison	Common Curriculum	P value
Most/all males the same age:				
Have had more than sip of alcohol	55%	53%	57%	ns
Drink weekly	40%	40%	39%	ns
Have smoked marijuana	23%	24%	21%	ns
Smoke marijuana weekly	26%	27%	24%	ns
Most/all females the same age:				
Have had more than sip of alcohol	25%	25%	26%	ns
Drink weekly	15%	15%	16%	ns
Have smoked marijuana	8%	7%	9%	ns
Smoke marijuana weekly	9%	9%	9%	ns
Great harm to students from using:				
Alcohol	46%	48%	44%	ns
Marijuana	62%	62%	62%	ns
Cigarettes	54%	52%	55%	ns

Table 6 provides student accounts of substance use behaviours. Again, accounts by condition are remarkably similar. Of all the behaviours assessed, only lifetime—but not recent—use of cigarettes is significant. Although students in the comparison schools are somewhat older, they report similar levels of recent substance use.

Item	Total	Comparison	Common Curriculum	P value
Had more than sip of alcohol	88%	88%	88%	ns
Had alcohol 10 or more times	37%	39%	36%	ns
Ever been drunk	40%	39%	40%	ns
Ever smoked marijuana	29%	30%	27%	ns
Ever smoked cigarettes	23%	26%	21%	<.01
Ever used steroids	5%	5%	5%	ns
Ever used inhalants	20%	19%	21%	ns
Recently used alcohol	55%	54%	56%	ns
Recently been drunk	19%	20%	18%	ns
Recently smoked marijuana	15%	15%	15%	ns
Recently smoked cigarettes	8%	9%	6%	ns
Recently used steroids	4%	5%	4%	ns
Recently used inhalants	10%	9%	11%	ns

This pattern of findings is confirmed in the planned analyses. Outcomes considered include: a scale of peer norms; a scale of attitudes towards substance use (i.e., harm); and recent use (yes/no) of each of the substances listed above. Not surprisingly given the descriptive results above, there are no significant differences on any of these outcomes using the Wilcoxon paired test.

We now turn to students' reports of norms and attitudes related to fighting and aggression. Here, there are several significant differences but the direction of findings is inconsistent. As shown on Table 7, students in the intervention schools are somewhat ($p < .05$) *less likely* to feel you would be perceived as a coward if you backed down from a fight (67% compared with 73%). However, they are also *more likely* to endorse pro-violent items that relate fighting to respect; for example, 49% of comparison school students compared to 55% of intervention students agree that a boy who doesn't fight loses respect. Thus, on half the attitude items, there is virtually no difference between the groups; on the other three, results neither support nor counter the hypothesis that students in the intervention schools will report less violent, more prosocial norms and attitudes.

Item	Total	Comparison	Common Curriculum	P value
Most/all males the same age:				
In physical fight	56%	55%	56%	ns
Fight weekly	31%	33%	30%	ns
Most/all females the same age:				
In physical fight	25%	28%	22%	<.01
Fight weekly	18%	20%	16%	ns

Agree with pro-violence attitudes				
Coward if back down from fight	70%	73%	67%	ns
Okay to fight if really angry	35%	34%	35%	ns
Not fighting doesn't show strength	33%	32%	33%	ns
Girls who don't fight lose respect	44%	41%	47%	ns
Boys who don't fight lose respect	52%	49%	55%	<.01
Okay to hit girl if she hits first	40%	40%	40%	ns
Okay to hit boy if he hits first	61%	61%	62%	ns

Two additional survey items addressed anger management. Youth were asked to rate on a four-point scale how often they “felt angry at the world” and how often they felt like they could “hardly keep their temper.” On the first item, there was a difference at $p < .01$ in mean scores by condition, with students in the comparison schools reporting less anger (mean=2.00) than those in intervention schools (mean=2.14). However, there are no differences on the second.

Paired analyses were conducted for two outcomes: a scale of pro-violent attitudes and a scale of peer norms. At a trend level, students in the intervention schools are marginally less likely ($p < .05$) to report that peers were engaged in fighting, but more likely to endorse pro-violent attitudes.

The final health domain addresses sexuality. As shown on Table 8, only a minority of Form 3 youth—less than 30%--feel that boys and girls their age are “old enough to have sex.” This does not vary by condition. On three normative items—whether same-age peers have had sex—there appear to be differences by condition. However, not shown are analyses by gender, showing this is true only for females. Not surprisingly, given age differences, 71% of girls in the comparison schools perceive that most or all females their age have had sex, compared to 60% of those in the intervention schools. They also think more boys their age have had sex. However, this is not the case when youth report on their friends. Overall, youth indicate that fewer of their male and female friends have had sex than the larger peer group of all males and females their age.

In terms of attitudes, students in the intervention schools are somewhat more likely to say that boys having sex are popular (53% agree compared to 46% in the comparison condition) and get respect (49% compared with 40%). Not shown, these differences are apparent for both genders.

Item	Total	Comparison	Common Curriculum	P value
Agree “yes”:				
Boys same age old enough to have sex	29%	29%	29%	ns
Girls same age old enough to have sex	26%	28%	26%	ns
Answering most/all:				
Males the same age have had sex	64%	69%	60%	<.001
Male friends have had sex	57%	60%	54%	<.01
Females the same age have had sex	53%	58%	49%	<.001
Female friends have had sex	42%	44%	40%	ns

Agree with Pro-Sex Attitudes				
Girls my age having sex are popular	32%	30%	33%	ns
Girls my age having sex get respect	13%	14%	13%	ns
Girls my age are usually forced	37%	35%	38%	ns
Boys my age having sex are popular	50%	46%	53%	<.01
Boys my age having sex get respect	45%	40%	49%	<.01
Boys my age are usually forced	14%	14%	15%	ns

Table 9 provides data on sexual behaviours. On the six items, including four measures of lifetime sexual encounters (sexual intercourse; sex without a condom; forced sex; more than one lifetime partner) and two recent measures (sexual intercourse in the last month and sex without a condom), there are no significant differences by condition.

Not shown, reports of recent sex are higher among males (29%) than females (22%). Examining behaviours by gender, among males, there are no differences in behaviours by condition. Only one of the six behavioural items is significant for females; at $p < .01$, females in the comparison schools are more likely to report having lifetime sex, again consistent with the fact they are somewhat older. However, there is no difference by condition in females' reports of recent sex.

Item	Total	Comparison	Intervention	P value
Ever had sex	42%	45%	40%	ns
Ever had sex without condom	33%	36%	31%	ns
Ever forced to have sex	18%	17%	18%	ns
More than 1 partner	31%	33%	30%	ns
Recent (last month) had sex	22%	22%	21%	ns
Recent sex without condom	16%	19%	14%	ns

Finally, five items assessed youths' intentions to engage in risk behaviours in the coming year. There are no differences by condition either in individual intention items or on a summative scale of intentions (mean, intention scale score, comparison=2.47; mean, intention scale score intervention=2.41, ns). Differences are also not significant within gender, although males, overall, report higher intentions (males, comparison=2.63, intervention=2.36; females, comparison=2.17, intervention=2.24).

Multiple sex-related outcomes were considered in paired analyses. These include a scale of pro-sex attitudes, a scale of peer norms, recent sex, and condom use among those who reported sex. Students in the Common Curriculum schools were marginally ($p < .05$) more likely to report pro-sex attitudes, which is consistent with item reports above. Supporting findings on the other behavioural domains, there were no significant differences on norms or behaviours by condition.

HIV/AIDS Stigma and Knowledge

The first set of items on Table 10 address student knowledge about HIV and sexually transmitted infections. Overall, only one in ten students answered all items correctly. For example, 81% of youth know that you can get HIV/AIDS from having sex once without a condom and 66% know that HIV could be transmitted through breast milk. By contrast, only about a quarter know that some STI can make a woman not able to have a baby, and just over half (58%) know that a women could have an STI and not know it. As shown, there are no differences by condition in correct answers on these items. There are, however, small but statistically significant differences on two items. Students in the Common Curriculum schools are more likely to report the correct answers to the following items: Only people having sex with gay people can get AIDS; and you can get AIDS through casual contact. This is consistent with the fact that more students in the intervention answered more items correctly: 57% got 5 or more items correct, compared to 46% of those in the comparison schools ($p < .01$). However, once again, this finding is based on differences among females; 64% of females in the intervention schools got 5 or more answers correct, compared to 51% in the comparison schools ($p < .001$). These figures are substantially lower among males and do not differ by condition (47% and 42%, respectively, ns).

Also shown on the table are items assessing HIV/AIDS stigma. Levels of stigma remain high; for example, only 17% of students say they would buy food from a shopkeeper with AIDS, and just under half say a teacher with AIDS who is not sick should still teach. There are no significant differences by condition on these items or on a composite scale of HIV/AIDS stigma (comparison mean=10.67; intervention mean=10.76).

Table VI.10. Form 3 Student Reports of HIV/AIDS and STI knowledge and Rejection of HIV/AIDS Stigma				
Item	Total	Comparison	Common Curriculum	P value
Correct answers on the following:				
Can get HIV from sex once without a condom (true)	81%	82%	80%	ns
People with AIDS look sick right away (false)	72%	70%	74%	ns
Only people having sex with gay people get AIDS (false)	76%	72%	79%	<.001
You can get AIDS through casual contact (false)	78%	75%	80%	<.01
HIV can be transmitted through breast milk (true)	66%	64%	68%	ns
A woman can have an STI and not know it (true)	58%	57%	58%	ns
STI can make woman not able to have a baby (true)	25%	25%	26%	ns
Endorsement of HIV/AIDS Stigma				
Teacher with AIDS but not sick should still teach	47%	45%	48%	ns
Would buy food from shopkeeper with AIDS	17%	17%	18%	ns
Would not keep secret if family member with AIDS	20%	20%	19%	ns
Remain friends with someone with AIDS	67%	67%	67%	ns
Child with AIDS allowed to go to your school	53%	50%	55%	ns

EVALUATION LIMITATIONS AND CHALLENGES

As noted in Section III (Evaluation Methodology), this evaluation had multiple purposes. The process evaluation was designed to document the initial delivery of a new curriculum, with lessons learned quickly turned around to inform midcourse refinements. These refinements reflected teachers' experiences addressing the challenges of implementation, with the positive result that an empirically-informed Common Curriculum is now available for dissemination. However, starting evaluation activities so early has implications for interpreting findings from the impact evaluation. That is, during the delivery of new lessons in each Form, teachers and schools were in the initial stage of programme adoption, testing lessons that were still being "piloted" and revised. Educational research shows that as teachers become more familiar with curriculum, especially when new pedagogy as well as new content are incorporated, they are more likely to implement lessons with fidelity. Thus, the impact of lessons delivered for the first time may be muted, both by lack of teachers' experience and by not benefiting from the curriculum refinements resulted from field lessons learned.

As with any evaluation, there are also limitations to both study design and implementation. As discussed, a high standard was set for showing differences between "standard HFLE practices" underway after years of effort in each country and the new Common Curriculum that was developed to enhance ongoing health education. There was not, therefore, a "do-nothing" control; rather, the evaluation compared "HFLE standard" to "HFLE enhanced." In such situations, variations in schools, student compositions, teacher experience and a host of other factors (such as teacher comfort with interactive pedagogy) may influence outcomes and, especially, present a conservative bias, that is, make it more difficult to detect differences between the two study conditions.

There were also difficulties and limitations related to evaluation resources and implementation issues. For example, because delivery of lessons took longer than anticipated, follow up surveys were not conducted, as planned, one month after the completion of the classes in the intervention schools, and consistent with CDC and other requirements for showing evidence of effectiveness. This resulted from the fact that most teachers were not able to complete the lessons (even with additional time) and many were teaching until the very end of the school term. The tradeoff was between teachers not completing even a majority of the Form 3 lessons or conducting an immediate post-test. We opted for an immediate post-test to assure that end-of-year surveys were completed and students received as many lessons as possible.

There were other issues at the school and country-levels that influenced the rigor of the evaluation and call for caution in interpreting. These include greater than anticipated changes in school size and/or demographic composition from baseline to follow up and lower response rates at follow up. Given these changes, it would have been useful to have conducted end-of-year surveys after each form, not just at the end of Form 3. However, this was not feasible, given resources available. Unfortunately, this restriction limited the detection of problems midstream, reduced the ability to detect interim effects or to increase statistical power by using data across multiple time points.

In addition, the evaluation design assumed that most students would remain in the same schools from Form 1 to Form 3. However, substantial proportions of Form 3 students reported that they

were in a different school during Form 2 across the four countries. Since the intervention was conceived as a three-year program, students in the intervention schools may not, therefore, have received a “full dose” of intervention. In addition, there may have been significant cross-over, with students from the comparison schools exposed to the Common Curriculum in prior years. Our ability to examine these patterns is limited by not having baseline and follow up surveys linked, through a unique identification code for each student. While this is often done in longitudinal research, it was not practical to track students in this way across the countries.

Finally, implementation issues limit interpretation of results and pose challenges for future implementation. The units were not implemented fully in any year, and topics taught in intervention and comparison schools may be similar, placing the emphasis on discerning differences in pedagogy. Further, fewer classroom observations were conducted than planned, making it difficult to quantify differences in health lessons delivered in intervention and comparison schools. Given these problems plus the limitations of the study design, it may not be surprising that there are not consistent, clear positive findings. While teachers’ efforts to implement interactive skills-oriented lessons may not have translated into measurable changes at the student level, this may be more than one should expect during the initial years of adoption of a new curriculum being implemented by relatively inexperienced teachers.

Taken together, these limitations suggest that caution be used in interpreting results from the impact evaluation. Findings should not be interpreted to mean that HFLE is not working or that it is unimportant for students' health and well-being. Rather, the data reported above show only that, during the initial years of developing and implementing the Common Curriculum, we were not able to detect significant improvements over standard HFLE practices, as delivered in comparison schools. Further, findings point to the importance of addressing challenges in implementation as the programme is disseminated, so that students may benefit from the impact of full delivery of HFLE lessons.

VII. CHALLENGES AND RECOMMENDATIONS

The evaluation of the implementation and impact of efforts to introduce a Common Curriculum that supports the HFLE Framework has provided many lessons for informing future efforts. It also raises critical questions that need to be addressed at the Ministry level to maximize the success of dissemination and provide the infrastructure and support needed for full delivery. The findings in the proceeding sections identify challenges both with regard to the scope of the HFLE Common Curriculum and with regard to the process of school adoption and implementation of lessons. To be effective in teaching students the life skills that will promote their health and well-being as well as school success, addressing these challenges is critical.

As the evaluators of these ongoing efforts, we note that challenges are to be expected in the early stages of adoption of any new curriculum. Evaluation research often points to the need to extend the examination of effectiveness until a programme has been up and running for a longer time, so that start-up hurdles are overcome and early barriers are identified and overcome. This does not negate the importance of conducting rigorous evaluation from the outset, because valuable lessons are learned, as pointed out here, to help strengthen the dissemination, delivery and impact of HFLE in the future.

RECOMMENDATIONS

The evaluation of the implementation and impact of efforts to introduce a Common Curriculum that supports the HFLE Regional Curriculum Framework has provided many lessons for informing future directions. It also raises critical questions that need to be addressed at the Ministry level to maximize the success of dissemination and provide the infrastructure needed for full delivery. The findings in the preceding sections identify challenges both with regard to the scope of the HFLE Common Curriculum and with regard to the process of school adoption and implementation. To be effective in teaching students the life skills that will promote their health and well-being as well as school success, addressing these challenges is critical.

One set of challenges pertains to the curriculum. Documentation of implementation challenges raises questions regarding: How many units (and lessons within a unit) can be realistically taught per year? Can and should this time allotment be the same for all three Forms? What “dosage” of HFLE is likely to maximize benefits for students? Should the health targets of units and lessons be narrowed to assure that priority health problems, such as violence and HIV/AIDS, are sufficiently addressed?

Another set of challenges pertains to implementation. Difficulties of achieving full implementation raise questions that must be considered at the Ministry and school level. For example: How can a cadre of teachers be identified, trained, and retained to deliver effective lessons? How can lesson delivery be monitored to support fidelity and increase effectiveness? What Ministry and school administrative support is needed to assure implementation? Since students change schools, how can school programmes, such as this curriculum be implemented country-wide?

As these broader questions are being addressed, there are several concrete steps that can be taken to move forward HFLE efforts:

First, this study has shown that implementation issues are a major factor in all pilot countries. Therefore, the success of HFLE relies on the ability of Ministries to sustain support for HFLE and ensure that HFLE is timetabled into classroom schedules and that this schedule is adhered to. In addition, both Ministry and local school administrator support is needed to ensure early selection of teachers and allow time for training. Training is critical to success, given the sensitivity of much of the content covered and the fact that many teachers had not previously led interactive, participatory exercises.

Second, observations and documentation of classroom delivery support the importance of providing a standardized curriculum, as done here. The availability of a fully scripted curriculum facilitates lesson delivery in a way that a Regional Curriculum Framework alone does not. This is especially important when, as is often the case, there is teacher turnover and many teachers assigned to HFLE have limited experience either with the content or pedagogy. It is notable that teachers and students welcomed the interactive, participatory approaches of HFLE as well as the activities that were incorporated in the Common Curriculum.

Third, even with specified lessons, classroom delivery varied across countries, schools, and classrooms. To maximize benefits to students, monitoring and documenting classroom implementation is important for assuring that the goals of the Regional Curriculum Framework and Common Curriculum are addressed and the lessons are taught with sufficient fidelity to maximize effectiveness.

Fourth, competing priorities for classroom time must be balanced with the goals of HFLE. In this evaluation, only two HFLE units were developed, delivered and evaluated; it was difficult for many teachers to implement 10 lessons per theme. However, two other themes—one addressing eating and fitness and the other, managing the environment—are also regional priorities. For these four themes to be addressed, it will be important to make hard decisions about what and how much can be covered in each Form.

Finally, findings point out the need to better understand the many factors that influence implementation, fidelity to the Common Curriculum, and outcomes achieved. In addition to documenting effectiveness as dissemination proceeds, it is important to learn from and attend to the realities of what happens in classrooms, and how teachers can be best prepared and supported in the delivery of life skills-based health education.

In sum, this evaluation marked a positive step forward in developing and documenting classroom implementation of a HFLE Common Curriculum. Findings are the result of successful, multi-year, collaborative efforts across the region and within each participating Ministry and school, and underscore both the challenges and potential of coordinated curriculum and training approaches to meet student health needs.