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# USAID/ZAMBIA CHANGES2 PROGRAM BASELINE RESULTS REPORT



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## Table of Contents

A.	Executive Summary .....	1
B.	Introduction.....	2
C.	Monitoring and Evaluation in CHANGES2 .....	2
D.	CHANGES2 Baseline: Methods.....	4
D.1	Baseline Data Collection in Year 1.....	5
D.2	Data Collection Schedule.....	6
D.3	Data Analysis .....	6
E.	CHANGES2 Baseline Results .....	7
E.1	Student Assessment .....	7
E.1.1	Students attending government school students, community school students, grant-aided students .....	8
E.1.2	Urban and rural students .....	8
E.1.3	Orphan status .....	10
E.1.4	Male and Female Students .....	11
E.1.5	Conclusion of student assessment.....	13
E.2	Teacher Assessment.....	14
E.3	Classroom Observation.....	20
E.4	School Environment Checklist .....	23
F.	Conclusion .....	24

## Attachments

**Appendix A: Male and Female Student Assessment Frequencies**

**Appendix B: Male and Female Teacher Assessment Frequencies**

**Appendix C: Classroom Observation Checklist Frequencies**

**Appendix D: School Environmental Checklist Frequencies**

## A. EXECUTIVE SUMMARY

The CHANGES2 program is funded by USAID/ ZAMBIA through an EQUIP1 Associate award. It is implemented by the American Institutes for Research (AIR) and the Zambia Ministry of Education. Its aim is to strengthen basic education teachers' professional skills related to health and education with a special emphasis on HIV/AIDS prevention. The program concentrates basic education activities in four of Zambia's nine provinces, namely Lusaka, Copperbelt, Central and Southern Provinces.

CHANGES2 has established a monitoring and evaluation plan and an operational system to track performance and for reporting progress. Specific indicators have been established to comply with requirements of various funding sources as well as to meet Ministry of Education (MOE) and USAID/Zambia expectations. Because CHANGES2 focuses beyond monitoring service delivery, a series of case/control and observational study designs have been employed to measure the quality of interventions and the impacts on students and teachers. This report presents the results of the baseline for all of CHANGES2 instruments.

Baseline data establishes benchmarks against which the project measures its performance. As such the most important result of the baseline analysis is to determine whether the intervention and control groups have any statistically significant differences which would limit the project's ability to gauge the impact of the intervention after one year. In this case, intervention and control groups presented no statistically significant differences that might interfere with end-of-the-year analysis. Moreover, the multiple instruments utilized will allow CHANGES2 to triangulate the effects of its interventions by comparing student and teacher perceptions with CHANGES2 staff's classroom observations.

Although these were the primary outcomes of the analysis, exploration of the data was useful in determining relationships relevant for project implementation as well as for confirming the overall program design. Several key findings included:

- Significant disparities in knowledge of HIV/AIDS between community, government and grant-aided schools
- Lower levels of perception of risk for acquiring HIV/AIDS in urban versus rural areas, despite higher prevalence rates in urban areas
- Large number of orphans (50% of sample) who routinely do not eat both before and during school
- High-levels of parity in self-efficacy among genders in perceived ability to negotiate abstinence
- Importance of providing teacher training to improve pedagogy, SHN and HIV/AIDS outcomes
- Need for increased community engagement to support SHN, especially for OVC

Clear and pressing needs were demonstrated for the spectrum of CHANGES2 activities with those surveyed frequently lacking adequate knowledge, attitudes and practices relevant to HIV/AIDS, SHN and the provision of quality education.

## B. INTRODUCTION

The CHANGES2 program is funded by USAID/ ZAMBIA through an EQUIP1 Associate award. It is implemented by the American Institutes for Research (AIR) and the Zambia Ministry of Education. CHANGES2 is a four year program. Its aim is to strengthen basic education teachers' professional skills related to health and education with a special emphasis on HIV/AIDS prevention. The program concentrates basic education activities in four of Zambia's nine provinces, namely Lusaka, Copperbelt, Central and Southern Provinces. In addition, CHANGES2 provides scholarships for OVC in secondary school in these four provinces as well as in Eastern and Northwestern. The program has a national office in Lusaka and provincial offices in the four basic school focus provinces. The target populations for CHANGES2 activities are teachers (Pre-service and In-service), pupils, and community members.

All CHANGES2 activities support two intermediate results (IRs) under the USAID/Zambia mission's strategic objective for the education sector, *Improved Quality of Basic Education for More School-Aged Children, Phase II*

- IR 6.1 Improved Quality of Basic Education Delivery Systems
- IR 6.4 Mitigate the Impact of HIV/AIDS on the Education System

To achieve its broader goals, the CHANGES2 program focuses on six program components. These are HIV/AIDS, Teacher Education, School Health and Nutrition (SHN), School-Community Partnerships, Small Grants, and OVC support. Gender, and institutional capacity building are cross cutting concerns in all the components. The component objectives and the activities carried out under each component are indicated in tables 1 below.

## C. MONITORING AND EVALUATION IN CHANGES2

CHANGES2 has established a monitoring and evaluation plan and operational system to track performance and for reporting progress. Integral to this process is the establishment of indicators and baselines for the program's various component areas. Specific indicators have been established to comply with requirements of various funding sources as well as to meet Ministry of Education (MOE) and USAID/Zambia expectations. CHANGES2 tracks 8 mandated and 26 non-mandated indicators. The reporting obligations consist of quarterly as well as semi-annual and annual reports. The collection of M&E data is done through a number of monitoring mechanisms, such as:

- Field monitoring and reporting of school level activities by district level MOE officers
- Field monitoring and reporting by CHANGES2 provincial staff
- Reports by sub-contracted partner organizations

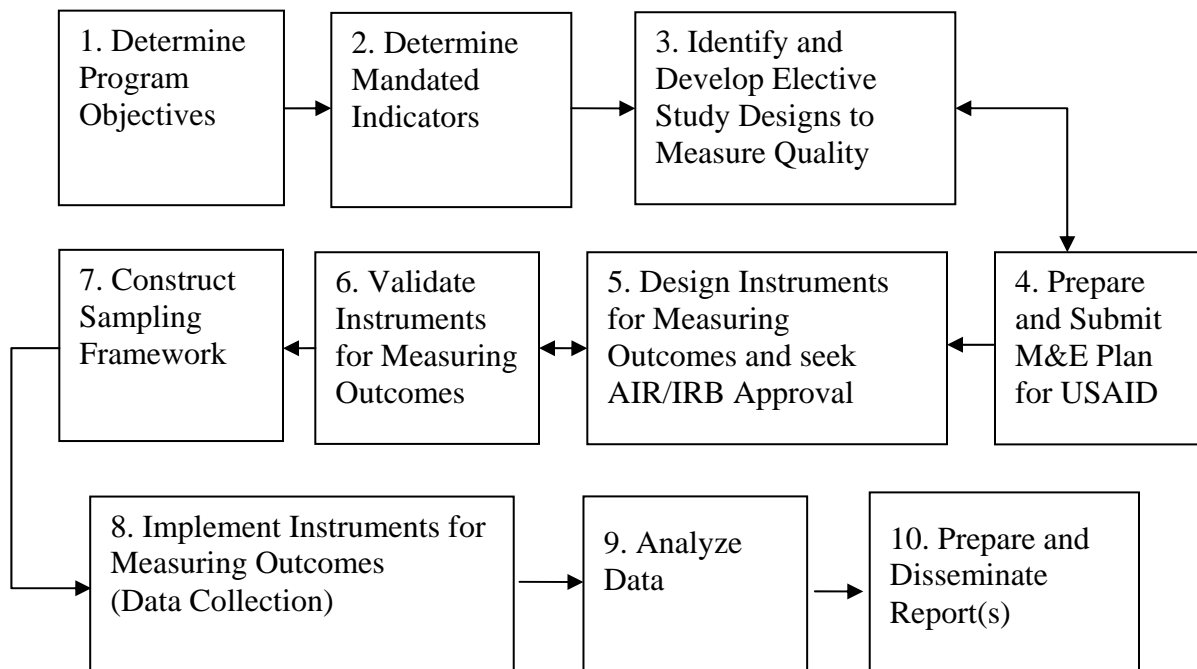
While this is sufficient to demonstrate the scope of CHANGES2 activities, USAID/Zambia expressed considerable interest in CHANGES2 making extra efforts to document the quality of the intervention. Thus, if the monitoring plan indicates how many teachers were trained, the assessment report provides CHANGES2 with information regarding how those trainings impacted teacher knowledge as well as teacher pedagogy.

**Table 1: CHANGES2 Component objectives and activities**

<b>Components</b>	<b>School Health and nutrition</b>	<b>Teacher training</b>	<b>Scholarships</b>	<b>Small grants</b>	<b>Materials development</b>	<b>Community outreach</b>
Component Objectives	Support improved health of students and teachers by providing information and training on good health and nutrition practices, and by providing micro-nutrient, de-worming, and bilharzhia treatment for pupils.	Support improved knowledge of SHN, HIV/AIDS, and quality Instruction methods among teachers by providing training for Pre-service and in-service teachers and capacity building of zonal resource centres (ZRCs)	Support children orphaned by AIDS to remain in school and enable them serve as peer educators in effort to mitigate the HIV pandemic by providing scholarships in grade 10-12.	Support local NGOs and community groups to initiate and expand programs that target youths for activities such as HIV/ AIDS clubs, mentoring, after school and out of school through provision of grants and institutional support.	Promote improved awareness and knowledge of healthy life skills among pupils, teachers, and community members, and improved teaching skills among teachers through designing, production and distribution of IEC, training and supplemental learning materials.	Support schools to become a learning and action resource for the entire community by promoting school community partnership.
<b>Activities</b>						
	Provision of information and training at school, district, and provincial level	Training of pre-service teachers in HIV/AIDS, SHN, and improved pedagogy	Provision of scholarships for OVCs in grades 10-12	Provision of capacity building grants to Teachers training colleges.	Design, production, and distribution of awareness and knowledge promotional materials	Support schools to involve parents and community groups in both SHN and HIV/AIDS mitigation activities.
	Provision of micronutrient and treatment of parasites and schistosomiasis	Training of in-service teachers in HIV/AIDS, SHN, and improved pedagogy	Provision of capacity building TA for granting NGOs	Provision of capacity building grants to local NGOs, CBS and FBOs.	Design, production, and distribution of teacher training and supplemental learning materials	Support schools to work with communities in fostering support for scholarship recipients and other OVCs.
		Capacity building for zonal resource centers		Provision of capacity building grants to Basic Schools.		Support schools to work with local community organizations to implement and expand programs that promote Abstinence and be faithful and that target youths with comprehensive skill-based prevention activities

## D. CHANGES2 BASELINE: METHODS

As part of the monitoring and evaluation plan submitted and approved by USAID/Zambia, CHANGES2 submitted the following diagram illustrating the M&E process employed by CHANGES2.



In this diagram, baseline analysis provides input into steps 8 and 9. CHANGES2 focuses beyond monitoring service delivery and consequently incorporates activities to measure program impact. In this regard CHANGES2 tracks baseline data in its component areas of Teacher Education and Professional Development, HIV/AIDS, School Health and Nutrition, Small Grants, and in School Community Partnerships and Outreach.

The approach taken by CHANGES2 for the baseline is to use a case/control design study. The primary sampling unit for the baseline is the school. In order to maximize the cost-effectiveness of the assessment activities, schools targeted for CHANGES2 intervention's in year 2, serve as control schools for year 1 (See the following section and the text box below for a more complete explanation).

## D.1 Baseline data collection in year one

CHANGES2 targets 400 schools each year comprised of 100 schools in each of 4 provinces. In each province 6 schools from schools targeted in year 1 were sampled as intervention schools and 6 schools from schools that will be targeted in year 2 were sampled as control schools. This created a sample of 12 schools from each province, making a total baseline sample of 48 schools.

At each sampled school, data was collected from teachers and pupils through interviews and through observing classroom practices and school environments. There were separate interview questionnaires for male teachers, female teachers, male students, and female students. Data was collected by CHANGES2 provincial staff and their MOE counterparts, including the Provincial Standards Officer, Teacher Education.

**The collection of baseline data for comparison purposes is planned to be done every year according to the following schedule:**

Year 1: 6 Intervention schools (called 'A' schools) and 6 control schools (called 'B' schools) were chosen in each province for pre-test. Baseline data was collected from both sets of schools. CHANGES 2 interventions commenced in 'A' schools but not in 'B' schools.

Year 2: Data will be collected from 'A' schools and 'B' schools are compared. Then an additional set of 6 control schools (called 'C' schools) will be selected from each province and baseline data will be collected from these schools. CHANGES 2 interventions will then be done in 'A' and 'B' schools but not in 'C' schools.

Year 3: Data will be collected from 'A' 'B' and 'C' schools and compared. CHANGES 2 interventions will be done in 'A' and 'C' schools but not in 'B' schools.

Year 4: Data will be collected from 'A' and 'C' schools and compared.

Thus in year one 48 schools consisting of 12 schools from each of the provinces will be involved in the study, broken down in each province as 6 intervention schools and 6 control schools.

In year two and three 72 schools consisting of 18 schools from each of the 4 provinces will be involved in the study.

In year four 48 schools consisting of 12 schools from each of the 4 provinces will be involved in the study.

CHANGES2 sought to balance this elicitation of student, teacher and community perceptions with CHANGES2 staff direct observations. As such a school health and nutrition environmental checklist was developed. This tool enabled CHANGES2 staff to evaluate how the school environment may be impacting children's health by looking at structural factors such as the availability of toilets and school gardens. Similarly, a classroom observation checklist was developed that would explicitly allow CHANGES2 staff to measure improvements in teacher pedagogy. In total, nine separate data collection instruments were developed and CHANGES2 staff were provided training in administering the instruments uniformly to ensure reliability as well as training on maintaining confidentiality in accordance with CHANGES2's Institutional Review Board (IRB) plan. One of the purposes of using a plurality of instruments was to help provide multiple perspectives to CHANGES2 on key topics.

For teacher interviews, 2 males and 2 females were selected from each of the control schools and another 2 males and 2 females were selected from the intervention schools. Thus, a total of 192 teachers, 96 teachers from control schools and 96 from intervention schools were sampled.

For pupil interviews, 5 males and 5 females were selected from each of the control schools and another 5 males and 5 females were selected from the intervention schools. Thus, a total of 480 pupils, 240 pupils from control schools and 240 pupils from intervention schools were sampled.

The school health and nutrition environmental checklist was administered in all 48 sampled schools while the Classroom Observation Checklist was administered in three classrooms at each of the 48 sampled schools. In total 144 classroom observations were done.

## **D.2 Data collection schedule**

The activities that were done for year one baseline collection were as follows:

<b>Date</b>	<b>Activity</b>
January 12, 2006	Provincial Teams consolidate lists of year 1 and Year 2 intervention schools
January 16 -18, 2006	TAs plan data collection strategy and instruments
January 19, 2006	TAs sample intervention schools from year one school lists and control school from year 2 school lists
January 22, 2006	TAs develop the general schedule for data collection in schools and plan provincial team orientation
January 24-27, 2006	TAs travel to provinces to orient Provincial Teams on the planning for the Baseline data collection exercise. (Review school list, divide teams and schedule data collection, review draft instruments, etc.)
February 1 – 3, 2006	TAs conduct training of baseline data collection teams (4 CHANGES2 Provincial staff + 3 MOE Provincial Standards Officers + 1 Planning Officer per Province)
February 6, 2006	Final amendments to data collection instruments
February 7 – 8, 2006	Mass printing of baseline data collection instruments
February 9 – 10, 2006	Delivery of baseline instruments to provinces
February 13 – 24, 2006	Collection of baseline Data in all provinces

## **D.3 Data Analysis**

Data was analyzed between July 15, 2006 and August 15, 2006. Data was cleaned and analyzed using SPSS 14.0 for Windows.



## **E. CHANGES2 BASELINE: DATA FINDINGS**

Baseline data establishes benchmarks against which the project measures its performance. As such the most important result of the baseline analysis is to determine whether the intervention and control groups have any statistically significant differences which would limit the project's ability to gauge the impact of the intervention after one year. In this case, intervention and control groups presented no statistically significant differences that might interfere with end-of-the-year analysis (Appendices A-D provide response frequencies for intervention and control groups).

Although this was the primary outcome of the analysis, exploration of the data was useful in determining relationships relevant for project implementation as well as for confirming the overall program objectives and assumptions. In what follows, notable results of the baseline analysis are presented by collection instrument. Because CHANGES2 expects to impact many of the responses in these assessments, the end of the year report will contain a more complete analysis of the results.

### **E.1 Student Assessment**

For the purposes of both the student and teacher assessments, CHANGES2 utilized the well known Knowledge, Attitudes and Practices (KAP) methodology. KAP assessments are based on the supposition that while 'knowledge' is the foundation of positive behavior it is only meaningful if expressed in attitudes and practices.

As discussed in C1, for the purposes of the student assessment 5 male and 5 female students were selected in each of the 48 schools identified. To examine relationships in the data, data was segregated into some of the following broad typologies:

- 237 male students, 244 female students
- 240 cases, 241 controls
- 190 urban students, 291 rural students
- 13 lower basic students, 121 middle basic students, 347 upper basic students
- 450 government school students, 12 community school students, 19 grant-aided school students

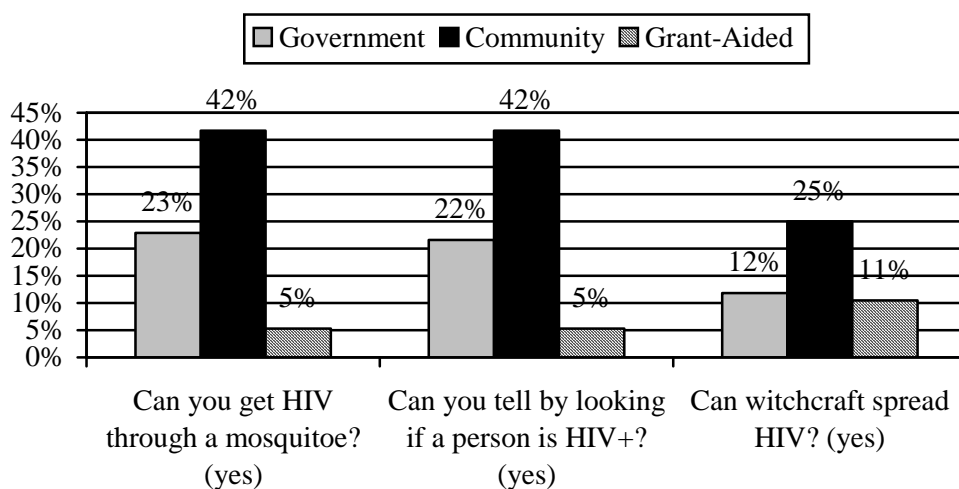
In addition, of the 481 students, 256 students had both parents living, 99 students only had their mother living (an additional 6 students were unsure whether their father was alive), 33 students only had their father living, and 87 students were double orphans.

As noted, case and control demonstrated considerable uniformity in response. Other means of classifying the data listed above, however, yielded important information. While it is beyond the scope of this report to detail all important findings derived from analyzing the data through these classifications, some prominent relationships are highlighted in detail below.

### ***E.1.1 Students attending government school students, community school students, grant-aided students***

CHANGES2 has so far focused predominantly on government schools with limited focus on community schools. Additional Fast-Track Initiative funding will help CHANGES2 expand its efforts to strengthen community schools. Results from the baseline assessment consistently show the heightened challenges community school teachers and students face. One striking example of this is student knowledge as it relates to HIV/AIDS. The figure below shows the percentage of students who have common misconceptions about HIV by the type of school they attend. Clearly, there is still much work to be done in providing basic information on HIV/AIDS in community schools.

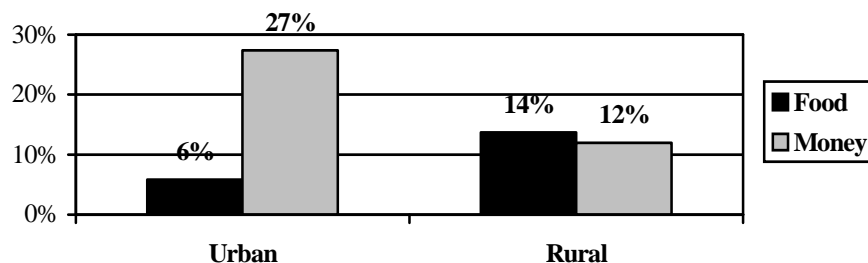
**Percent of students demonstrating misconceptions about HIV/AIDS**



### ***E.1.2 Urban and Rural Students***

Related to the type of school students attend, examining responses along an urban/rural dichotomy reveals both expected and surprising results. Among the expected results is that urban students are more likely than rural students to bring money to school and rural students are more likely to bring food. This is likely due to people in rural settings in general utilizing cash less frequently than their urban counterparts.

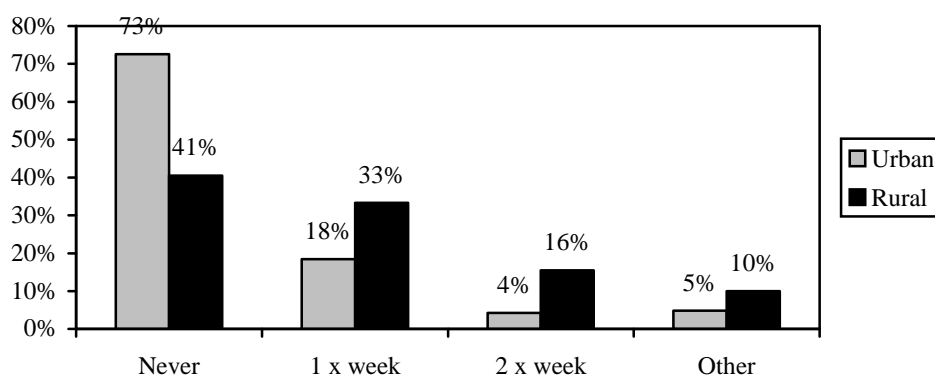
**Likelihood of bringing food or money to school**



Another of the expected results of the assessment is that rural students are more likely to be left alone in a classroom if their teacher isn't present (Urban= 56.8% Rural=72.9%). This is most likely explained by rural schools having fewer teachers who can cover for a missing teacher. Both of these results, although expected, have programmatic implications: for instance, while the teacher assessment reveals teacher absenteeism to be a problem in both urban and rural settings, these results would indicate that the effect of teacher absenteeism is likely most detrimental in rural settings and, as such, should be made a program priority.

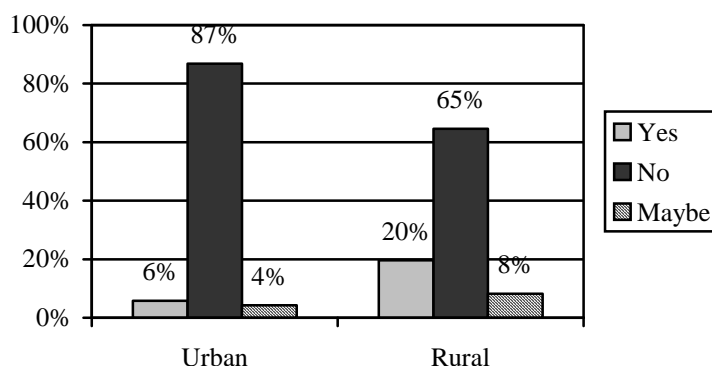
Among the results that are more surprising, urban students are less likely to have physical education than rural students which has also implications for CHANGES2 SHN implementation (See figure below).

**Likelihood of physical education in schools**



Another unexpected finding is that rural students perceive themselves at greater risk for HIV infection than their urban counterparts. This is an especially surprising finding given the generally higher rates of infection in urban areas.<sup>1</sup> The explanation for this data is not self-evident to CHANGES2 staff and will have to be explored further in focus group discussions.

**Self-perceived risk of HIV infection**

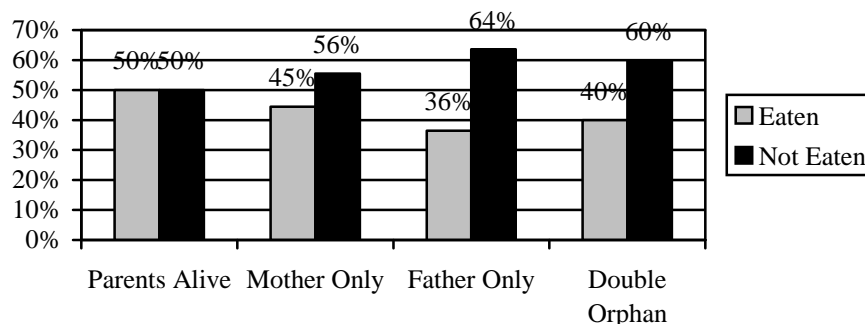


<sup>1</sup> UNAIDS 2006. Downloaded from <http://www.unaids.org/en/Regions/Countries/Countries/zambia.asp> on October 10, 2006

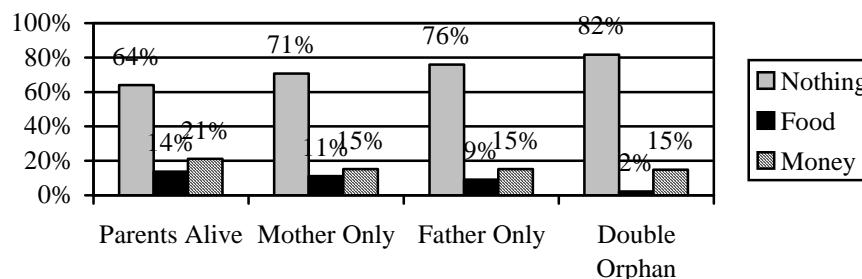
### E.1.3 Orphan status

A major component of CHANGES2 is support to orphans and vulnerable children (OVC). This support at the secondary-school level occurs through the provision of scholarships and is based on numerous studies that demonstrate the challenge OVC face in attending school and the extra support required to prevent them from dropping out. At the primary school level CHANGES2 provides support to OVC through African Education Initiative funds to address psycho-social needs as well as through select SHN interventions and small grants. In this assessment, orphan status is predictive of a number of outcomes including the likelihood of eating before school and bringing food or money to school. While the data supports the contention that children, regardless of orphan status are at risk of not eating, it also suggests that orphans are at greatest risk. These results clearly affirm the notion that OVC are more at risk, and hence, deserve increased support. Interestingly enough, in relation to survey questions addressing nutrition, children who are double orphans are not much more at risk than children who live with only their father; both have less than a 50% of having not eaten before school and not having brought food or money to school.

**Orphan status and likelihood of eating before school**



**Orphan status and likelihood of bringing food or money to school**



### ***E.1.4 Male and Female Students***

Because of CHANGES2's emphasis on gender, variability in male and female responses has important programmatic implications. For many of the questions provided, male and female response patterns are not substantially different. For instance, males and females are both approximately equally likely to be orphans, to have adequate food and to perceive themselves at risk for HIV infection. Nonetheless, some important distinctions remain.

In the baseline data, males tended to be slightly older than females with a mean for males' age at 16.09 and 14.99 for females'. Although, males and females overwhelmingly believe they are not at risk for acquiring HIV as a result of abstaining from sex (N=295) among those students who do believe themselves at risk, distinctions do exist by gender.

#### **Why do you think you might get HIV?**

Response	Male	Female
Don't use condoms always	15.2%	17.1%
Inconsistent condom use	12.2%	8.6%
Partner looks sick	3%	8.6%
Don't know past history of partner/ don't trust partner	57.6%	48.6%
Other ways to contract HIV	3%	2.9%
Partner has other partners	30.3%	20%

For this question participants were able to provide more than one response and, as a consequence, the response rate for males and females exceeds 100% (M= 121.3%, F=105.8%). Because males were more likely to list multiple responses on this question and other questions of similar format, some challenges in interpreting the data exist. Nonetheless, we can see that males are more likely to believe female partners have/will have other male partners than the converse.

Responses concerning students' self-perceived risk of HIV acquisition should be compared with teachers' self-assessment of risk (See E.2) where teachers' have notably less confidence in avoiding HIV infection. This differential could be due to a presumed greater percentage of teachers being sexually active and respondents limiting the interview question "Do you think you will contract HIV?" to an immediate timeframe.

In some instances, parity among genders was itself surprising. For instance, in response to the question "Would you be able to insist on condom use even when your partner does not want to want to use it?" only 60.3% of males responded 'yes' as opposed to 63.9% of females which contradicts common beliefs of higher-levels of perceived sexual self-efficacy among males.

Data results from several questions specifically asked to males are:

**Do you think a woman can refuse to have sex with a man who has given her money or gifts and wants to have sex?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	27	23.5	25	20.5
No	85	73.9	94	77.0
Don't Know	2	1.7	2	1.6
No Response	1	.9	1	.8
Total	115	100.0	122	100.0

**Can a woman refuse to have sex with her supervisor, if he demands that she have sex with him?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	60	52.2	59	48.4
No	50	43.5	53	43.4
Don't Know	3	2.6	10	8.2
No Response	2	1.7	0	0.0
Total	115	100.0	122	100.0

**How easy or difficult is it for a girl to refuse to have sex with her teacher if he demands sex?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Easy	46	40.0	45	36.9
Somewhat easy	11	9.6	9	7.4
Somewhat difficult	17	14.8	25	20.5
Very difficult	36	31.3	43	35.2
Don't Know	4	3.5	0	0.0
No Response	1	.9	0	0.0
Total	115	100.0	122	100.0

While males' responses to these questions indicate males' belief that female students are relatively powerless to stop the sexual advances of an authority figure, when females are posed similar questions, they tend to have a greater sense of their own self-efficacy. For example, 96% of female respondents say they would not have sex with a teacher even if he demanded it, while 31% of males believe it would be very difficult for her to not comply with a teacher's request.

**Would you accept to have sex with someone who cares for you, even if you don't want to?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	10	8.0	11	9.2
Maybe	1	.8	1	.8
No	111	88.8	107	89.9
Don't Know	1	.8	0	0.0
No Response	2	1.6	0	0.0
Total	125	100.0	119	100.0

**Do you think you can exchange sex for school support?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	6	4.8	15	12.6
Maybe	1	.8	0	0.0
No	117	93.6	104	87.4
No Response	1	.8	0	0.0
Total	125	100.0	119	100.0

**Would you accept to have sex with your teacher if he demands?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	2	1.6	3	2.5
No	120	96.0	116	97.5
Don't Know	2	1.6	0	0.0
No Response	1	.8	0	0.0
Total	125	100.0	119	100.0

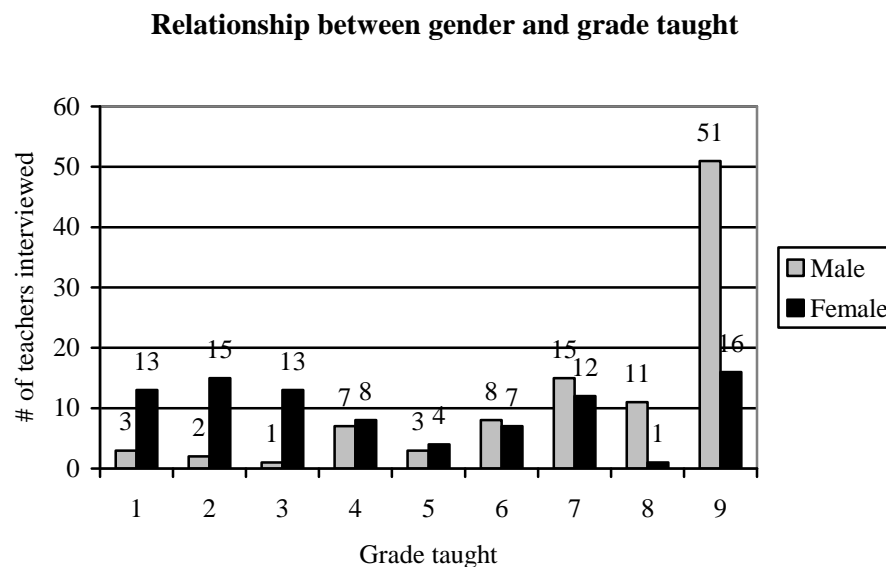
***E.1.5 Conclusion of student assessment***

The results of the student assessment validate CHANGES2 program assumptions and intervention priorities. Students, while demonstrating knowledge of HIV in some respects, clearly lack comprehensive information. With over 95% of all students wishing to know more about HIV and over 50% of students requesting additional information on HIV in school, CHANGES2 will find a receptive audience for its interventions and CHANGES2 should register significant impact in follow-up surveys anticipated in its M&E plan. Under the SHN component a high percentage of students do not receive an adequate quantity of food nor sufficient amounts of fruits and vegetables. In many other questions related to SHN, such as hand-washing habits, a high percentage of students already have good practices even if, in the case of students in community schools, they do not have access to soap. Impacting those students who do not have good practices and demonstrating those impacts quantitatively will be a challenge for the program. While the next assessment will determine program impact across all of CHANGES2's priority areas, additional questions will be added to the assessment to help document more fully how student knowledge and attitudes translates into practice; especially as it relates to older students' (at least 16 years of age) sexual practices. Furthermore, complex relationships, such as the relationship of urban or rural status and perceived risk of acquiring HIV, will be explored in focus group discussions.

## E.2 Teacher Assessment

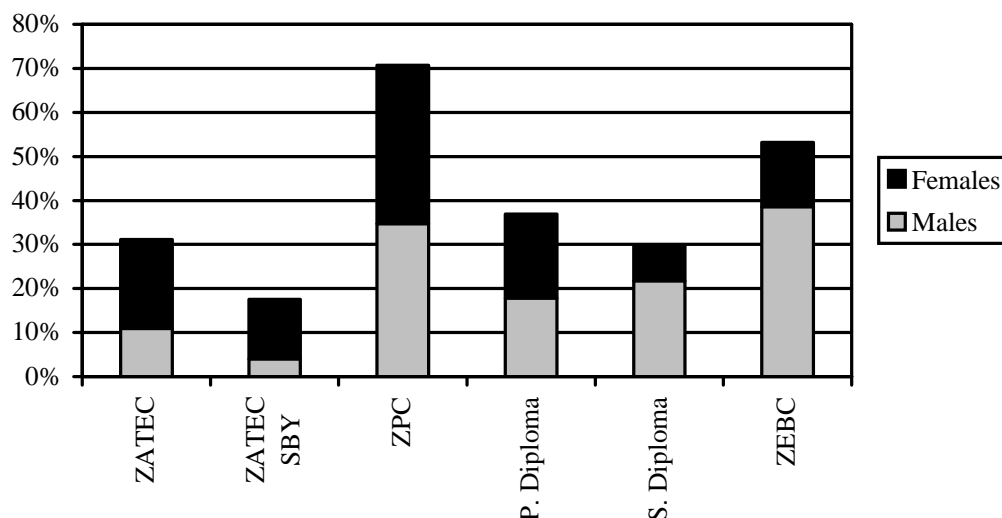
Although some of CHANGES2 interventions directly impact students, most attempt to impact students through improving the quality and relevance of teachers' instruction. As a consequence, it is important to gauge the program's impacts on teacher knowledge, attitudes and practices as a proxy measure for impact on students.

In the course of the assessment 116 teachers in rural areas and 74 teachers in urban areas were interviewed. Over 90% of these were teachers in government schools with slightly more than half being males. As the graph below demonstrates, males tended to teach higher grades with over half of the male teachers interviewed teaching 9<sup>th</sup> grade. Given well-established relationships between grade-level (as a proxy for age) and sexual debut, the data would suggest that girls frequently lack female mentors at critical times.

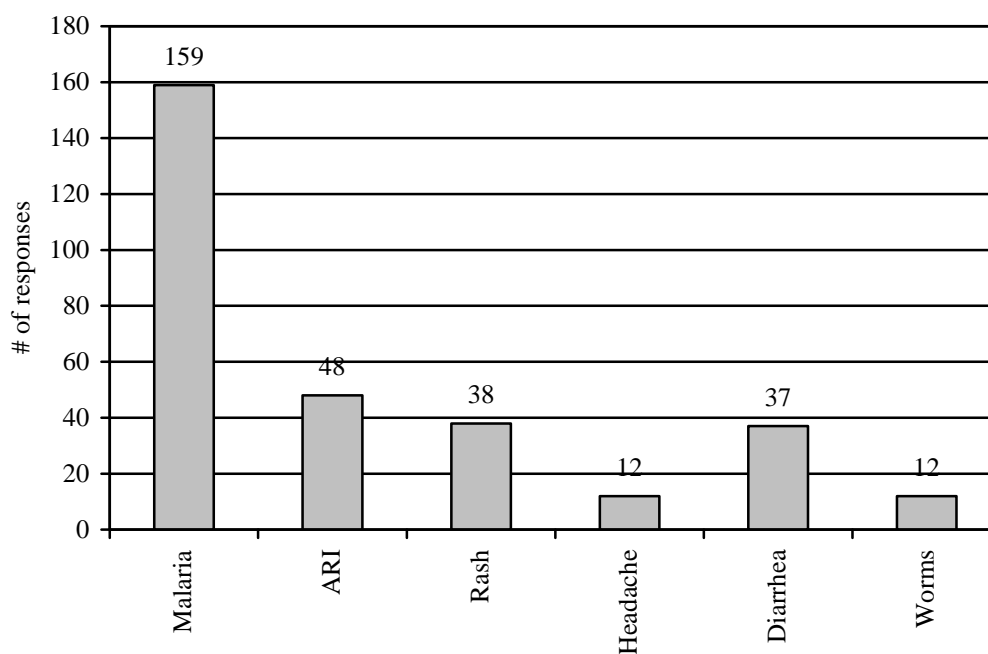


This difference in grade taught is likely accounted for by educational level of qualification with males being more likely to have received an advanced degree such as a secondary diploma.



**Relationship between gender and teaching qualification**

Teachers received a variety of interview questions relating to SHN and their responses were extremely informative regarding program implementation. One of the most important results was obtained when querying teachers about common illnesses at school (see graph below).

**Commonly cited illnesses children suffer from at school**

As the graph clearly demonstrates, teachers perceive malaria as being the most common illness in school. To date, CHANGES2's SHN program has not placed an emphasis on malaria prevention to the degree that teacher perceptions of the illness would seem to warrant. The

results from this assessment indicate the need to provide more support for malaria prevention and CHANGES2 is placing a greater emphasis on malaria prevention in year 2. Equally important, epidemiological results from CHANGES make it amply clear that bilharzias are widely endemic among Zambia's school children. That only 10 teachers consider bilharzias a common illness demonstrate that teachers mostly identify acute illnesses and fail to identify chronic conditions that are equally devastating to children's health and learning. A second interpretation of the data is that 'malaria' is used as a catch-all phrase to describe any illness where a fever is present.

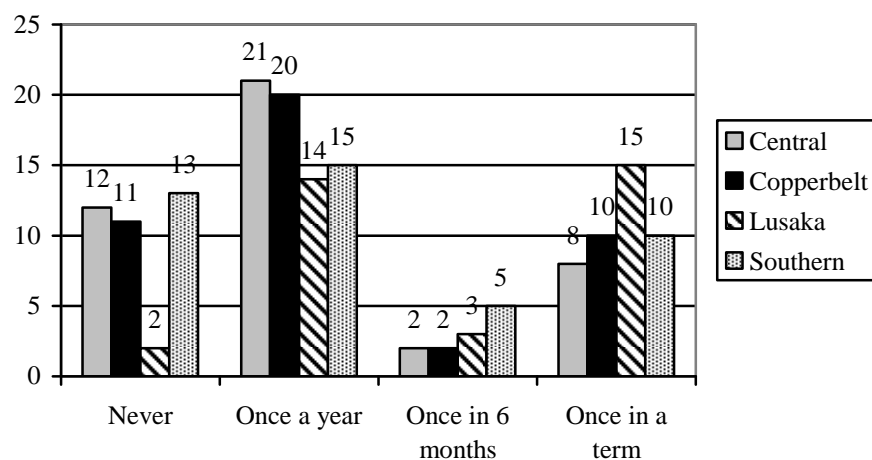
In any event, in order to ensure the sustainability of the deworming component of the SHN intervention at the school-level, CHANGES2 must educate teachers on both the wide-spread prevalence and significant negative-impact of bilharzias and other chronic conditions.

As the table below shows, teachers do know what to do in the event a student is ill, but no common definition of 'Very Ill' and 'Slightly Ill' exists. Again, CHANGES2 is formulating the basic information teachers need in order to ensure children who need care are appropriately referred to local health centers.

**Question 202 and 203: What do you do when a child comes to your class slightly ill?**

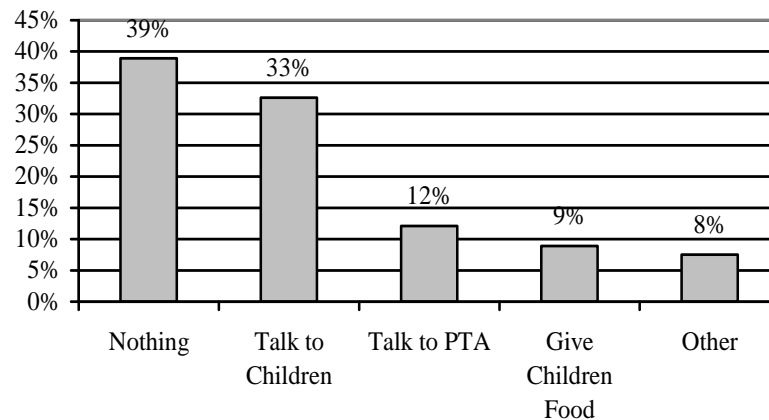
Action Taken	Number of Responses (Slightly ill)	Number of Responses (Very ill)
Refer to local health center	N=82	N=121
Send child home	N=75	N=30
Treat at school	N=20	N=17
Call a parent or guardian to come	N=9	N=58
Have other children take him/her home	N=8	N=14
Other	N=23	N=23

Teachers' need to be informed regarding when to refer children is especially important given the infrequency of visits by health center staff (see graph below).

**Reported number of health center visits by province**

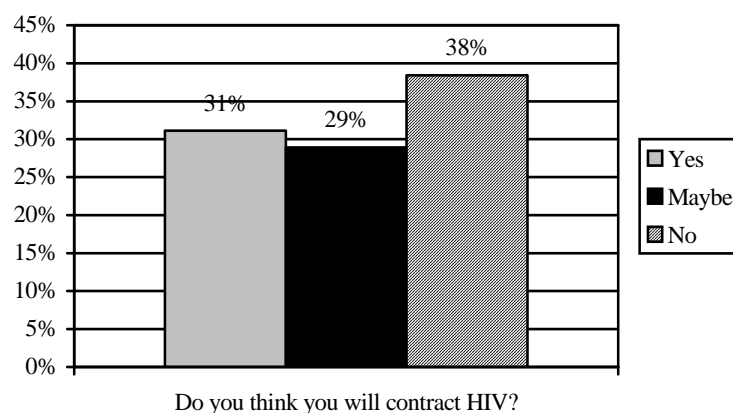
What the graph demonstrates is that most schools receive inadequate number of visits with most schools in some provinces, such as Central province, receiving 0 or 1 visits a year. In all provinces, for schools that receive 0 visits, over 80% are located in rural areas making the need for SHN programs that engage teachers even more acute in these settings. When health center visits do occur, they primarily consist in providing immunizations, conducting blood drives, deworming children, giving presentations and conducting physical screening. Although some of these activities are part of the SHN intervention, the infrequency of the visits warrants teacher involvement. Clearly, continued collaboration needs to be promoted among teachers and health center staff.

A final area of programmatic interest related to the SHN intervention has to do with teacher responses to children not bringing food to school. As the graph below demonstrates the most common teacher responses to children not bringing food to school are to do 'nothing' or to 'talk to children'. However, the results of the student assessment show that students know what nutritious food is and the importance of eating it, but slightly more than 1/3 cannot afford to change their eating habits and a further 1/3 do not make the choices concerning food in their household. As a consequence, the program must continue to assist teachers and schools address lack of food at the school through PTA action plans, school-gardens and other innovative strategies.

**Responses to the question, “What does your school do to promote children carrying food to school?”**

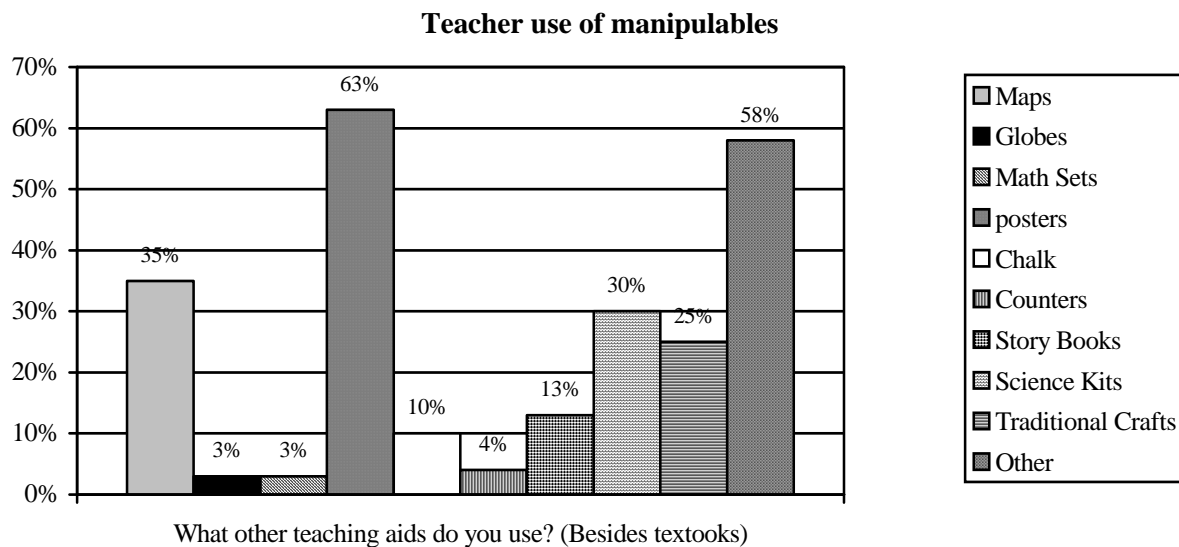
Teacher responses regarding HIV/AIDS were also interesting. In general, teachers are much more informed about HIV/AIDS than students although lack of information still exists in pockets. For instance, over 15% of teachers in rural schools believe one can acquire HIV/AIDS through witchcraft and, although sample sizes were small, 75% of teachers in community schools believed transmission by witchcraft was possible. In other instances teacher knowledge is quite high. For example, 93% of teachers already understand that HIV cannot be transmitted by mosquitoes.

Teachers exhibited a greater sense of self-efficacy concerning sexual relations than students and teachers believed condoms to be more effective than students did, but generally only used condoms for birth control purposes (most teachers reported they were in monogamous relationships). Despite these beliefs and practices, as the following graph shows, teachers were far more likely than students to perceive themselves at risk for HIV infection. While from a programmatic perspective there is no optimal level of risk-perception, what is important is that perception of risk aligns with current or intended behavior. This is a result CHANGES2 will explore further during the next assessment.

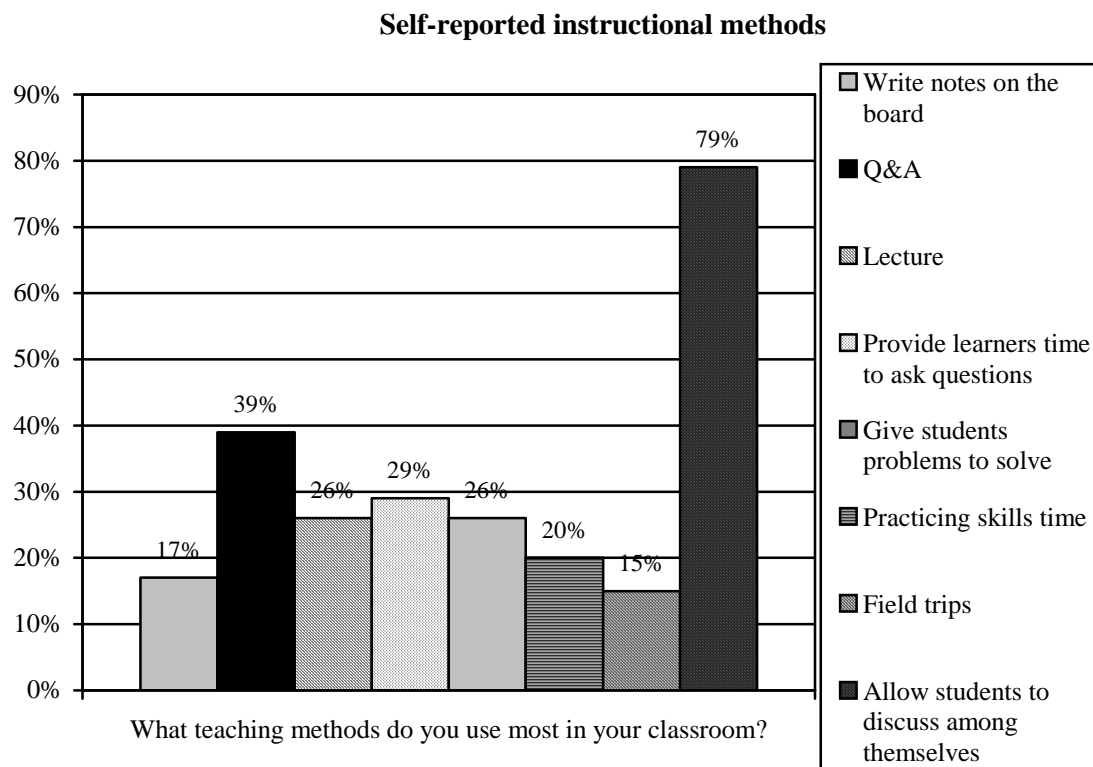
**Teacher Responses to the question “Do you think you will contract HIV?”**

Perhaps the most important results of the teacher assessment have to do with teachers' self-perceived teaching practices. These results when analyzed in light of the Classroom Observation results present a complex picture of teacher practices, and given the discrepancies in reported/observed teacher practices that exist between the two instruments, demonstrate the need to continue with an approach to improve teaching that acknowledges teacher self-perceptions.

In general, 93% of teachers report using text books to prepare lessons and 43% of teachers say students use textbooks every lesson. The Classroom Observation (to be discussed in the subsequent section) assessment suggests this self-assessment is reasonably accurate although there is no exact corresponding item. As the graphs show below, beyond textbooks, teachers listed a wide variety of manipulables that are commonly used in teaching and a variety of methods for conveying that information.



\*Note- Teachers could list multiple responses. Hence responses do not total 100%

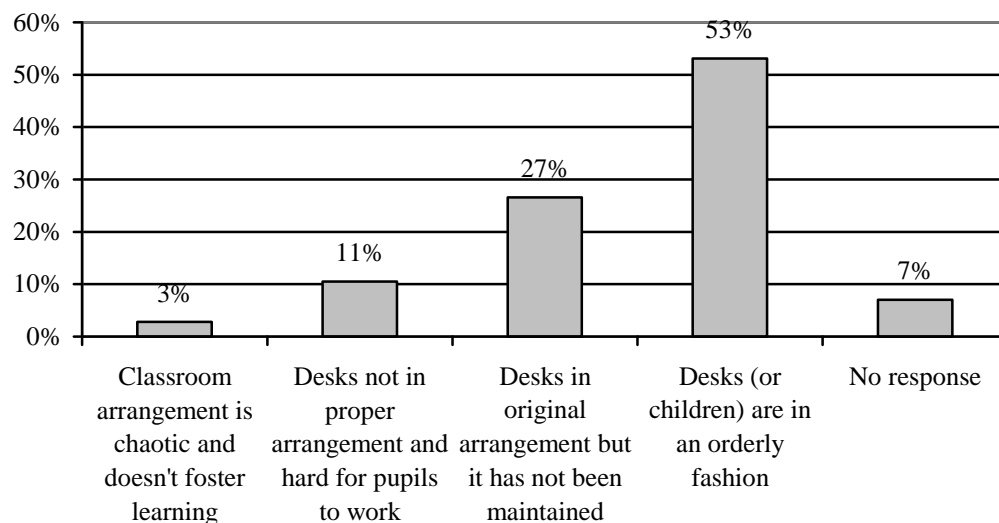


### E3. Classroom Observation

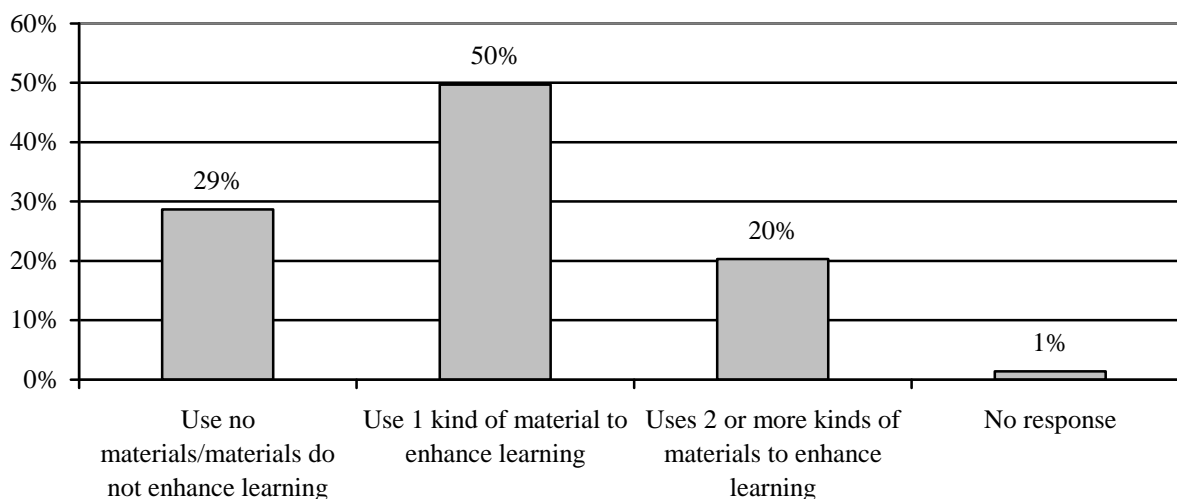
The Classroom Observation Tool was created to allow CHANGES2 staff to measure program-driven changes in subjects such as teacher pedagogy, use of classroom materials, and integration of HIV prevention education. 74 teachers were observed in the intervention group and 69 teachers were observed in the control group. Most of these observations occurred in government funded, upper basic schools. Classroom observations were well distributed between the four intervention provinces with more teachers in rural areas than urban observed (n=100 and n=43, respectively).

For the purposes of the baseline assessment only a few of the items on the Classroom Observation Tool will be discussed (complete item breakdowns are given in Appendix C).

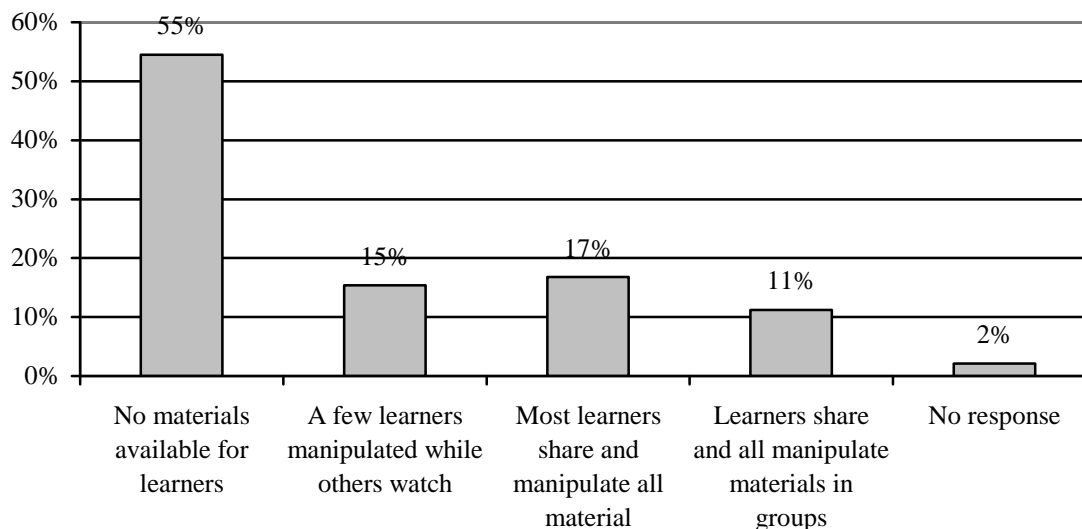
The figure below demonstrates that approximately ½ of all classrooms could benefit from basic interventions to improve the physical layout of the classroom. This data is mostly consistent with the teacher assessment where 30% of teachers believed their classrooms were “very tidy” and 57% of teachers believed their classrooms were “somewhat tidy”.

**Percent of classrooms with an atmosphere appropriate for learning**

Although, teachers listed a variety of instructional materials used in classrooms, Classroom Observation data indicates that these materials tend to be used infrequently. Because CHANGES2 staff believes that appropriate use of materials can be an important means of engaging children, the project's goal is that a greater percentage of teachers use at least one type of material to enhance learning (See figure below).

**Percent of teachers who use materials to enhance learning**

Moreover, where materials did exist and were available to be used by learners, not all learners had the opportunity to use materials (See figure below).

**Use of materials by students**

Two items in the Observation Checklist examined the way groups are used to facilitate learning. The first item attempted to determine what the characteristics of the groups were, while the second item examined how learners interact within a group. In the first case we can see that more than 1/3 of all classes that were observed did not use groups.

Use of groups in classroom	Frequency	Percent
Whole class only (no group)	55	38.5
Uses permanent groups with or without assigned roles	56	39.2
Uses flexible groups without assigned roles	12	8.4
Uses flexible groups and assigned roles	17	11.9
No Response	3	2.1
Total	143	100.0

Of course, the beneficial use of groups in classrooms is only as effective as the activities of the individual group. Among those teachers who do utilize groups, less than 10% of those groups discuss problems, questions and activities. These results indicate that simply encouraging teachers to make use of groups more often will not benefit learning.



<b>Effectiveness of groups in classroom</b>	<b>Frequency</b>	<b>Percent</b>
Learners sit in groups but work as individuals	61	42.7
Only one or two learners in the group interact	11	7.7
Groups of learners with limited interaction	19	13.3
Groups of learners discuss problems, questions and activities	13	9.1
No Response	39	27.3
Total	143	100.0

\*Note- The high 'No response' rate on this question was due to the number of classrooms where there was no use of groups.

Additional questions addressed types of learner activities, teacher questioning skills, learner time-on-task, teacher encouragement of learners asking questions, and HIV/AIDS integration. In all of these areas, significant opportunities to improve teacher and learner behavior in the classroom existed. For instance, in 95% of the classrooms observations, no-HIV/AIDS component of the lesson was observed and, in those few instances, the HIV/AIDS component was not integrated into the lesson.

#### **E4. School Environment Checklist**

The School Environment Checklist was the simplest of the assessment instruments used by CHANGES2. The Checklist consisted of 23 items with dichotomous or multiple-choice outcomes and was administered in 12 schools in each of the four provinces. The purpose of the checklist was to examine environmental factors relevant to the SHN program. The presence or absence of these factors were elicited through questions regarding the adequacy of facilities such as toilets, water taps and school gardens as well as questions determining whether the school had appropriate policies regarding SHN and whether those policies were being implemented. With CHANGES2's emphasis on community schools in year 2 one challenge that will exist is that only 1 community school was sampled in the baseline making it difficult to judge impact. Nonetheless, the school environmental checklist documented numerous ways CHANGES2 can positively affect infrastructure highly relevant to any SHN program. Annex D provides a complete description of the questions asked and the results that were obtained.

## **F. CONCLUSION**

The baseline assessment provided a detailed description on the state of schools where CHANGES2 is working. The assessment examined teacher and student knowledge, attitudes and practices as they relate to HIV/AIDS, SHN, gender and the relevance and effectiveness of educational delivery. The baseline assessment accomplished its primary goal in setting standards against which CHANGES2 will measure the impact of the intervention on quality. Appropriate sampling methodologies were effectively instituted and intervention and control populations demonstrated consistent uniformity.

Two challenges that may surface in using this data to document program impact are the result of the enhanced emphasis on community schools and the holistic nature of the intervention. Briefly, although community schools were sampled under each assessment instrument, the number of government schools greatly exceeded the numbers of community schools. As a result, to achieve statistically significant impacts in community schools, the differences in baseline and year one measurements will have to be greater in community schools. The second challenge is while the results of this baseline will allow CHANGES2 to measure its impact on the items measured (notwithstanding the challenge with community schools mentioned above), there is a hypothesis that the collective impact of CHANGES2 interventions may display synergistic effects on important indicators captured on Zambia's Education Management Information System (EMIS). Thus, if retention rates among students are higher in CHANGES2 supported schools than the national average, it may be difficult to assign attribution to improved teacher pedagogy, decrease illness among students, improved support to OVC or the result of any specific CHANGES2 intervention in isolation.

Nonetheless, the relationships among data obtained in the assessment affirm the importance of a holistic, systemic reform program that relates HIV/AIDS and SHN to other education interventions. The impacts of CHANGES2 will demonstrate the need for the diversity of programs such as support for OVC, provision of SHN programs and provision of information regarding HIV/AIDS. The data support that all on-going activities have the ability to demonstrably support improved student enrollment, enhance rates of retention and the facilitate completion of a quality education.

## Appendix A

### CHANGES2 Community Health and Nutrition, Gender and Education Support Student Questionnaire Preliminary Results

	<b>Intervention (total n=240)</b>		<b>Comparison (total n=241)</b>	
	n	%	n	%
<b>PROVINCE</b>				
Central	60	(25.0%)	60	(24.9%)
Copperbelt	60	(25.0%)	60	(24.9%)
Lusaka	60	(25.0%)	60	(24.9%)
Southern	60	(25.0%)	61	(25.3%)
<b>LOCALITY</b>				
Urban	110	(45.8%)	60	(33.2%)
Rural	130	(54.2%)	161	(66.8%)
<b>TYPE</b>				
Lower Basic	1	(.4%)	12	(5.0%)
Middle Basic	51	(21.3%)	70	(29.0%)
Upper Basic	188	(78.3%)	159	(66.0%)
<b>GOV/COMM</b>				
Government	219	(91.3%)	231	(95.9%)
Community	10	(4.2%)	2	(.8%)
Grant-aided	11	(4.6%)	8	(3.3%)
<b>GENDER</b>				
Male	115	(47.9%)	122	(50.6%)
Female	125	(52.1%)	119	(49.4%)
<b>TIME</b>				
20 Minutes	110	(45.8%)	100	(41.5%)
21-30	106	(44.2%)	111	(46.1%)
31-40	17	(7.1%)	19	(7.9%)
41-50	4	(1.7%)	9	(3.7%)
over 50minites	3	(1.3%)	1	(0.4%)
no record	0	(0.0%)	1	(0.4%)

	<u>Intervention</u> (n=99)		<u>Comparison</u> (n=91)	
	n	%	n	%
<b>DISTRICT</b>				
Chbombo	10	(4.2%)	10	(4.1%)
Kabwe	10	(4.2%)	10	(4.1%)
Kapiri Mposhi	10	(4.2%)	10	(4.1%)
Mkushi	10	(4.2%)	10	(4.1%)
Mumbwa	10	(4.2%)	10	(4.1%)
Serenje	10	(4.2%)	10	(4.1%)
Chlalabombwe	10	(4.2%)	0	(0.0%)
Chingola	10	(4.2%)	10	(4.1%)
Luanshya	10	(4.2%)	10	(4.1%)
Masaiti	10	(4.2%)	10	(4.1%)
Mpongwe	10	(4.2%)	10	(4.1%)
Mufulira	0	(0.0%)	10	(4.1%)
Ndola	10	(4.2%)	10	(4.1%)
Chongwe	10	(4.2%)	25	(10.4%)
Lusaka	20	(8.3%)	15	(6.2%)
Luangwa	20	(8.3%)	0	(0.0%)
Kafue	10	(4.2%)	20	(8.3%)
Choma	10	(4.2%)	11	(4.6%)
Kalomo	10	(4.2%)	10	(4.1%)
Kazungula	20	(8.3%)	10	(4.1%)
Livingstone	10	(4.2%)	20	(8.3%)
Mazabuka	10	(4.2%)	10	(4.1%)

## Section 1 Background Characteristics

### How old are you?

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
12	3	1.3	5	2.1
13	14	5.8	9	3.7
14	59	24.6	64	26.6
15	47	19.6	62	25.7
16	48	20.0	42	17.4
17	36	15.0	31	12.9
18	19	7.9	13	5.4
19	8	3.3	7	2.9
20	4	1.7	5	2.1
21	1	.4	3	1.2
Don't Know	1	.4	0	0.0
Total	240	100.0	241	100.0

**What grade are you in?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
5	0	0.0	2	.8
6	6	2.5	7	2.9
7	53	22.1	95	39.4
8	72	30.0	48	19.9
9	109	45.4	89	36.9
Total	240	100.0	241	100.0

**What adults (over the age of 18) do you live with?** (Respondents could choose more than one option)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Mother Only	42	17.5	40	16.6
Father Only	9	3.8	14	5.8
Both parents	86	35.8	80	33.2
Siblings	63	26.3	73	30.3
Other relatives above the age of 18	101	42.1	97	40.2
Other guardians above the age of 18	52	21.7	52	21.6
Spouse	0	0.0	0	0.0
None	1	0.0	1	0.0
Boarding	1	0.4	0	0.0

**Is your mother living?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	179	74.6	182	75.5
No	61	25.4	59	24.5
Total	240	100.0	241	100.0

**Is your father living?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	148	61.7	141	58.5
No	89	37.1	97	40.2
Don't Know	3	1.3	2	.8
No Response			1	.4
Total	240	100.0	241	100.0

## Section 2 Health and Nutrition

### Did you eat any food before coming to school today?

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	100	41.7	122	50.6
No	139	57.9	119	49.4
No Response	1	.4	0	0.0
Total	240	100.0	241	100.0

**What did you eat?** (The statistics are based on all the students EXCEPT those who answered, "No", for the previous question.)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Tea and bread/nshima/rice/potatoes	52	51.5	65	53.3
Teac and fritters	0	0.0	3	2.5
Tea	6	5.9	3	2.5
Bread/scones	1	1.0	3	2.5
Nshima with fish/beans/meat/eggs	9	8.9	13	10.7
Rice	12	11.9	13	10.7
Nshima with veg	13	12.9	7	5.7
Maize	4	4.0	2	1.6
Wild Fruit	0	0.0	1	0.8
Samp	2	2.0	4	3.3
Soya porridge	2	2.0	5	4.1
Biscuits	0	0.0	1	0.8
No Response	0	0.0	2	1.6
Total	101	100	122	100

### Did you carry food or money to buy food to school today?

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Carried food	26	10.8	25	10.4
Brought money	46	19.2	41	17.0
No	166	69.2	170	70.5
No Response	2	.8	5	2.1
Total	240	100.0	241	100.0

**What food did you bring?** *(The statistics are based on the students who carried food to school.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Bread	3	11.5	4	16.0
Maize	6	23.1	7	28.0
Sugar cane	1	3.8	0	0.0
Rice/Nshima	4	15.4	8	32.0
Groundnuts	0	0.0	1	4.0
Sweet potatoes	2	7.7	0	0.0
Fruit	1	3.8	3	12.0
Crisps	2	7.7	2	8.0
Chibwantu	1	3.8	0	0.0
Nshima and veg/bens/sour milk	4	15.4	0	0.0
No Response	2	7.7	0	0.0
Total	26	100.0	25	100

**What food will you/did you buy?** *(The statistics are based on the students who brought money to school.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Popcorn	9	19.6	4	9.8
Sweets	8	17.4	6	14.6
Fritters/samoozas/chips	4	8.7	12	29.3
Soft drink	11	23.9	4	9.8
Bread/scones	7	15.2	7	17.1
Fruit	2	4.3	0	0.0
Maize	1	2.2	0	0.0
Samoozas	1	2.2	0	0.0
No Response	3	6.5	8	19.5
Total	46	100.0	41	100.0

**How often do you eat fruits?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
At least once a week	37	15.4	38	15.8
Twice a week	38	15.8	52	21.6
Once a week	51	21.3	52	21.6
Less than once a week	35	14.6	33	13.7
Other	69	28.8	56	23.2
Don't know	6	2.5	2	.8
No Response	4	1.7	8	3.3
Total	240	100.0	241	100.0

**How often do you eat vegetables?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
At least once a week	149	62.1	155	64.3
Twice a week	44	18.3	38	15.8
Once a week	11	4.6	7	2.9
Less than once a week	2	.8	1	.4
Other	32	13.3	40	16.6
Don't know	1	.4		
No Response	1	.4		
Total	240	100.0	241	100.0

**In the past term, did you learn about eating healthy foods at school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	169	70.4	171	71.0
No	69	28.8	69	28.6
No Response	2	.8	1	.4
Total	240	100.0	241	100.0

**Has the information changed your diet?** *(The statistics are based on students who answered "Yes", "No response", or "Don't Know" to the previous questions.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	107	62.6	114	66.3
No	63	36.8	57	33.1
No Response	1	.6	1	.6
Total	171	100.0	172	100.0

**Why not?** *(The statistics are based on students who answered "No", "No response", or "Don't Know" to the previous questions.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Food not available	13	20.3	13	22.4
Can't afford other foods	22	34.4	29	50.0
Someone else makes decisions about food	20	31.3	14	24.1
Don't Know	2	3.1	1	1.7
No Response	7	10.9	1	1.7
Total	64	100.0	58	100.0

**When do you wash your hands?** (Respondents could choose more than one option.)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Before Eating	208	86.7	211	87.6
After using the toilet	223	92.9	211	87.6
When the hands are dirty	94	39.2	96	39.8
After eating	122	50.8	137	56.8
Other	16	6.7	16	6.6



**What do you use when washing your hands at home?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Only water	30	12.5	24	10.0
Water and soap every time	106	44.2	110	45.6
water and soap sometimes	96	40.0	103	42.7
Other	8	3.3	4	1.7
Total	240	100.0	241	100.0

**How many times a week do you have physical education lessons at your school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Never	139	57.9	117	48.5
Less than once a week	4	1.7	3	1.2
Once a week	59	24.6	73	30.3
Twice a week	24	10.0	29	12.0
Every day	1	.4	7	2.9
Other	10	4.2	9	3.7
Don't Know	3	1.3	1	.4
No response	0	0.0	2	.8
Total	240	100.0	241	100.0

**What activities do you do after school? (Respondents could provide three answers.)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Sports	58	24.2	56	23.2
Reading	48	20.0	59	24.5
Study	78	32.5	72	29.9
Work in fields	25	10.4	42	17.4
Cleaning/housework	105	43.8	116	48.1
Fetch water/wood	33	13.8	34	14.1
Cooking	36	15.0	37	15.4
Buy food	2	0.8	1	0.4
Playing	24	10.0	14	5.8
Work	3	1.3	2	0.8
Caring for siblings	4	1.7	4	1.7
Take extra lessons at school	4	1.7	3	1.2
Watch TV/listen to radio	8	3.3	4	1.7
Errands for family	4	1.7	4	1.7
Travel long distance home	2	0.8	1	0.4
School activities	16	6.7	13	5.4
Looking after animals	6	2.5	6	2.5

**Since the beginning of this term, how many days of school have you missed because you were sick?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
None	158	65.8	154	63.9
1	31	12.9	25	10.4
2	22	9.2	25	10.4
3	6	2.5	17	7.1
4	5	2.1	4	1.7
5	5	2.1	3	1.2
6	1	.4	1	.4
7	9	3.8	7	2.9
8	1	.4	0	0
14	1	.4	2	.8
15	1	.4	0	0
20	0	0	1	.4
21	0	0	1	.4
30	0	0	1	.4
Total	240	100.0	241	100.0

**What illness or illnesses caused you to miss school?** *(The statistics are based on students who missed at least one school day because of illness(es). Respondents could provide more than one answer.)*

	Intervention (n=82)		Comparison (n=87)	
	Frequency	Percent	Frequency	Percent
Malaria	37	45.1	38	43.7
Resp. Illness/coughing	7	8.5	12	13.8
Injury (wound)	5	6.1	3	3.4
Headache	32	39.0	32	36.8
Diarrhea	2	2.4	1	1.1
Stomach pains/abdominal illness	9	11.0	15	17.2
Fever	3	3.7	3	3.4
Eye problems	0	0.0	2	2.3
Exhaustion	0	0.0	1	1.1
Flu	0	0.0	2	2.3
Sore throat	3	3.7	3	3.4
Boil	0	0.0	1	1.1
Nose bleeding	1	1.2	0	0.0
Swollen feet	1	1.2	2	2.3
Worms on skin	1	1.2	0	0.0
Uneasiness	1	1.2	0	0.0

**Since the beginning of this term, have you missed school for other reasons (other than your own illness)?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	75	31.3	80	33.2
No	161	67.1	157	65.1
No Response	4	1.7	4	1.7
Total	240	100.0	241	100.0

**Why did you miss school?** (The statistics are based on students who missed school for reasons not related to illness. Respondents could provide more than one answer.)

	Intervention (n=79)		Comparison (n=84)	
	frequency	percent	frequency	percent
Doing piece work to buy food	1	1.3	1	1.2
Non-payment of school fees	15	19.0	12	14.3
Too much rain	9	11.4	7	8.3
No soap to wash clothes	6	7.6	3	3.6
Sick relative	4	5.1	9	10.7
Lacked proper clothes/shoes	5	6.3	12	14.3
Hunger	1	1.3	2	2.4
Lack pens and books	5	6.3	6	7.1
Sports	0	0.0	2	2.4
Menstruating	1	1.3	0	0.0
Distance from home too far	5	6.3	1	1.2
Funeral	14	17.7	11	13.1
Caring for siblings	7	8.9	6	7.1
Working at home	7	8.9	7	8.3
Came late from holidays	0	0.0	4	4.8
No teaching at school	2	2.5	0	0.0
No Response	0	0.0	3	3.6

**From last term up to now, have any of your teachers missed a long period of school due to illness?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	55	22.9	97	40.2
No	175	72.9	136	56.4
Don't Know	7	2.9	7	2.9
No Response	3	1.3	1	.4
Total	240	100.0	241	100.0

**Do you know if this was due to pregnancy?** (The statistics are based on students who answered "Yes", "Don't Know", or "No Response" to the previous question.)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	7	10.8	5	4.8
No	37	56.9	71	67.6
Don't Know	17	26.2	21	20.0
No Response	4	6.2	8	7.6
Total	65	100.0	105	100.0

**When your teacher is not at school, what happens in your class?** (Respondents could choose more than one answer.)

	Intervention		Comparison	
	frequency	percent	frequency	percent
Students are sent home	3	1.3	1	0.4
Students join another class	12	5.0	10	4.1
Students left alone in the class	171	71.3	149	61.8
A substitute teacher is found	51	21.3	70	29.0
Other	8	3.3	12	5.0

### Section 3 Knowledge, Opinions, and Attitudes

#### Can people protect themselves from HIV?

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	221	92.1	216	89.6
No	14	5.8	18	7.5
Don't Know	2	.8	4	1.7
No Response	3	1.3	3	1.2
Total	240	100.0	241	100.0

**How can people protect themselves?** (The statistics are based on students who answered "Yes", "Don't Know", or "No Response" to the previous question. Respondents could choose more than one answer.)

	Intervention (n=226)		Comparison (n=223)	
	Frequency	Percent	Frequency	Percent
Using a condom	100	44.2	109	48.9
Having one partner	32	14.2	21	9.4
Abstaining from sex	188	83.2	188	84.3
Avoid sharp needles, injections, etc.	23	10.2	16	7.2
Casual contact	1	0.4	0	0.0

#### Do you think HIV is sometimes spread through witchcraft?

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	32	13.3	27	11.2
No	198	82.5	202	83.8
Don't Know	7	2.9	10	4.1
No Response	3	1.3	2	.8
Total	240	100.0	241	100.0

#### Can a person get HIV through a mosquito bite?

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	57	23.8	52	21.6
No	176	73.3	184	76.3
Don't Know	5	2.1	4	1.7
No Response	2	.8	1	.4
Total	240	100.0	241	100.0

#### Can you tell by looking if a person is infected with HIV?

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	45	18.8	58	24.1
No	189	78.8	175	72.6
Don't Know	4	1.7	5	2.1
No Response	2	.8	3	1.2
Total	240	100.0	241	100.0

**Do you think you will contract HIV?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	29	12.1	39	16.2
Maybe	14	5.8	18	7.5
No	182	75.8	171	71.0
Don't Know	12	5.0	13	5.4
No Response	3	1.3	0	0.0
Total	240	100.0	241	100.0

**Why do you think you might get HIV?** *(The statistics are based on students who answered “Yes”, “Maybe”, “Don’t Know”, or “No Response” to the previous question. Respondents could choose more than one answer.)*

	Intervention (n=58)		Comparison (n=70)	
	Frequency	Percent	Frequency	Percent
Don't use condoms always	7	12.1	12	17.1
Condoms broke	1	1.7	3	4.3
Condoms are not 100% safe	3	5.2	0	0.0
Have more than one partner	2	3.4	10	14.3
Don't trust partners	16	27.6	19	27.1
Partner has other partners	15	25.9	14	20.0
Partner looks sick	1	1.7	4	5.7
Don't know past history of partner	9	15.5	9	12.9
Many ways of contracting – injections, sharp objects, blood, etc	1	1.7	2	2.9

**Why do you think you will not get HIV?** *(The statistics are based on students who answered “No”, to “Do you think you might get HIV”. Respondents could choose more than one answer.)*

	Intervention (n=182)		Comparison (n=171)	
	Frequency	Percent	Frequency	Percent
Abstains from sex	151	83.0	144	84.2
Uses condoms every time	16	8.8	18	10.5
Has only one sex partner	12	6.6	8	4.7
Limits number of sex partners	1	0.5	1	0.6
Partner looks healthy	1	0.5	2	1.2
Partner tested negative	4	2.2	1	0.6
Other	8	4.4	5	2.9

**If a student has HIV but is not sick, do you think he or she should be allowed to continue attending school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	214	89.2	200	83.0
No	21	8.8	39	16.2
Don't Know	3	1.3	2	.8
No Response	2	.8	0	0.0
Total	240	100.0	241	100.0

**If a teacher has HIV but is not sick, do you think he or she should be allowed to continue teaching in school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	214	89.2	200	83.0
No	21	8.8	38	15.8
Don't Know	3	1.3	3	1.2
No Response	2	.8	0	0.0
Total	240	100.0	241	100.0

**A girl who carries condoms in her purse cares about herself.**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Agree	122	50.8	145	60.2
Disagree	111	46.3	87	36.1
Don't Know	3	1.3	7	2.9
No Response	4	1.7	2	.8
Total	240	100.0	241	100.0

**A girl will lose a man's respect if she requests that he use a condom.**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Agree	80	33.3	72	29.9
Disagree	145	60.4	158	65.6
Don't Know	9	3.8	10	4.1
No Response	6	2.5	1	.4
Total	240	100.0	241	100.0

**You can protect yourself from HIV/AIDS.**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Agree	228	95.0	229	95.0
Disagree	3	1.3	6	2.5
Don't Know	6	2.5	6	2.5
No Response	3	1.3		
Total	240	100.0	241	100.0

**How many sexual partners do you think you will have in the future?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
None	20	8.3	21	8.7
One partner	208	86.7	206	85.5
Several but one at a time	5	2.1	6	2.5
Other	1	.4	2	.8
Don't Know	4	1.7	5	2.1
No Response	2	.8	1	.4
Total	240	100.0	241	100.0

**Do you intend to use a condom every time you have sex?** *(The statistics are based on all students except those who answered "None" to the previous questions.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	113	51.4	119	54.1
Sometimes	22	10.0	21	9.5
No	79	35.9	72	32.7
Other	0	0.0	1	.5
Don't Know	3	1.4	6	2.7
No Response	3	1.4	1	.5
Total	220	100.0	220	100.0

**Why won't you use a condom every time you have sex?** *(The statistics are based on students who report that they will have sexual partners in the future (including "Don't Know" and "No Response"), and those who report that they will "sometimes" or "not" use a condom every time they have sex (including "Don't Know" and "No Response").*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Reduces pleasure	2	1.9	3	3.0
Can break	1	.9	1	1.0
Unsafe/Not 100% effective	14	13.1	7	6.9
Causes itchiness/discomfort	2	1.9	0	0.0
Spoils the mood	3	2.8	0	0.0
Shows lack of trust in your partner	20	18.7	28	27.7
Want children	23	21.5	13	12.9
Trusts partner	4	3.7	8	7.9
Don't use condoms with spouse	14	13.1	13	12.9
Use only for contraception	2	1.9	3	3.0
Both will have VCT	3	2.8	3	3.0
Don't know how	2	1.9	3	3.0
Condoms not always available	1	.9	0	0.0
Can't afford	1	.9	0	0.0
Can cause sickness if you are breastfeeding a baby	1	.9	0	0.0
Can cause disease	0	0.0	1	1.0
Don't Know	5	4.7	4	4.0
No Response	9	8.4	14	13.9
Total	107	100.0	101	100.0

**Section 4: Self-Efficacy****Question for Both Male and Female Students:**

**Would you be able to insist on condom use during sex even when your partner does not want to use it?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	149	62.1	150	62.2
Maybe	14	5.8	13	5.4
No	63	26.3	63	26.1
Don't Know	8	3.3	11	4.6
No Response	6	2.5	4	1.7
Total	240	100.0	241	100.0

**Questions Only for Male Students:**

**How easy or difficult is it for a girl to refuse to have sex with her teacher if he demands sex?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Easy	46	40.0	45	36.9
Somewhat easy	11	9.6	9	7.4
Somewhat difficult	17	14.8	25	20.5
Very difficult	36	31.3	43	35.2
Don't Know	4	3.5	0	0.0
No Response	1	.9	0	0.0
Total	115	100.0	122	100.0

**Do you think a woman can refuse to have sex with a man who has given her money or gifts and wants to have sex?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	27	23.5	25	20.5
No	85	73.9	94	77.0
Don't Know	2	1.7	2	1.6
No Response	1	.9	1	.8
Total	115	100.0	122	100.0

**Can a woman refuse to have sex with her supervisor, if he demands that she have sex with him?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	60	52.2	59	48.4
No	50	43.5	53	43.4
Don't Know	3	2.6	10	8.2
No Response	2	1.7	0	0.0
Total	115	100.0	122	100.0



**Questions Only for Female Students:****Would you accept to have sex with someone who cares for you, even if you don't want to?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	10	8.0	11	9.2
Maybe	1	.8	1	.8
No	111	88.8	107	89.9
Don't Know	1	.8	0	0.0
No Response	2	1.6	0	0.0
Total	125	100.0	119	100.0

**Do you think you can exchange sex for school support?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	6	4.8	15	12.6
Maybe	1	.8	0	0.0
No	117	93.6	104	87.4
No Response	1	.8	0	0.0
Total	125	100.0	119	100.0

**Would you accept to have sex with your teacher if he demands?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	2	1.6	3	2.5
No	120	96.0	116	97.5
Don't Know	2	1.6	0	0.0
No Response	1	.8	0	0.0
Total	125	100.0	119	100.0

**Section 5: Exposure to interventions****At school do you have programs on HIV, such as clubs or peer education?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	193	80.4	169	70.1
No	42	17.5	63	26.1
Don't Know	5	2.1	8	3.3
No Response	0	0.0	1	.4
Total	240	100.0	241	100.0

**What HIV programs are you involved in at school?** *(The statistics are based on students who report "Yes", "Don't Know", "No Response" to the previous question. Can provide more than one answer.)*

	Intervention (n=198)		Comparison (n=178)	
	Frequency	Percent	Frequency	Percent
Not Involved in any program	65	32.8	59	33.1
Anti-AIDS Club	108	54.5	102	57.3
FAWEZA Club	2	1.0	1	0.6
CHEP	1	0.5	2	1.1
Kwatu	0	0.0	2	1.1
Go Girls	1	0.5	0	0.0
Sripture Union	0	0.0	4	2.2
Chongololo Club	1	0.5	2	1.1
Drama Club	17	8.6	8	4.5
Learning about HIV	5	2.5	2	1.1
Red Cross	0	0.0	2	1.1
SAFE Club	17	8.6	3	1.7
Child to Child Club	0	0.0	1	0.6
SPW	0	0.0	3	1.7
Peer Counseling	2	1.0	2	1.1
SHN Club	3	1.5	0	0.0
Girl child program	1	0.5	0	0.0

**Do you think these programs are useful?** *(The statistics are based on students who report "Yes", "Don't Know", "No Response" to "At school do you have programs on HIV, such as clubs or peer education?". )*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	177	89.4	155	87.1
No	5	2.5	8	4.5
Don't Know	5	2.5	7	3.9
No Response	11	5.6	8	4.5
Total	198	100.0	178	100.0

**Why do you think these programs are useful?** *(The statistics are based on the students who think the programs are useful.)*

	Intervention (n=177)		Comparison (n=155)	
	Frequency	Percent	Frequency	Percent
Help members avoid HIV	47	26.6	35	22.6
Teach abstinence	27	15.3	21	13.5
Change pupils' behavior	36	20.3	39	25.2
Teach others about HIV	11	6.2	8	5.2
Teach life skills	1	0.6	1	0.6
Pupils learn self respect	5	2.8	0	0.0
Pupils concentrate on school	1	0.6	0	0.0
Unrelated to HIV	1	0.6	3	1.9
Warn of dangers of HIV/give knowledge	35	19.8	26	16.8
Learn to use condom	1	0.6	6	3.9
Learn how to care for those with HIV	0	0.0	1	0.6
Members get financial support	1	0.6	0	0.0
Keep pupils busy	0	0.0	1	0.6
Teach positive living with HIV	0	0.0	1	0.6
NO Response	9	5.1	11	7.1

**Why don't you think these programs are useful?** *(The statistics are based on the students who think the programs are NOT useful.)*

	Intervention (n=5)		Comparison (n=8)	
	Frequency	Percent	Frequency	Percent
Teacher does not come	2	40	0	0
Don't attend	0	0	4	50
Doesn't change behavior	0	0	1	12.5
No Response	3	60	3	37.5

**Do any of your teachers every talk to your class about HIV/AIDS and sexuality?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	187	77.9	206	85.5
No	50	20.8	34	14.1
Don't Know	0	0.0	1	.4
No Response	3	1.3	0	0.0
Total	240	100.0	241	100.0

**How often does your teacher discuss HIV/AIDS?** *(The statistics are based on students who answered "Yes", "No Response", "Don't Know" to the previous question.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Daily	34	17.9	34	16.4
Once a week	92	48.4	92	44.4
Once a term	15	7.9	23	11.1
2 times per week	22	11.6	32	15.5
3 times per week	1	.5	9	4.3
2 times per month	1	.5	2	1.0
Only once	2	1.1	2	1.0
Sometimes	15	7.9	5	2.4
1 time per month	1	.5	5	2.4
4 times per week	0	0	1	.5
Don't Know	2	1.1	1	.5
No Response	5	2.6	1	.5
Total	190	100.0	207	100.0

**Do you think your teacher is comfortable talking about sexuality?** *(The statistics are based on the same sample as above.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	165	86.8	185	89.4
No	19	10.0	18	8.7
Don't Know	3	1.6	2	1.0
No Response	3	1.6	2	1.0
Total	190	100.0	207	100.0

**How does your teacher teach you about HIV and sexuality?** *(The statistics are based on the same sample as above. Respondents could choose more than one answer.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Lectures	97	51.1	117	56.5
Gives us notes	19	10.0	8	3.9
Question and answer	71	37.4	56	27.1
Quizzes	9	4.7	7	3.4
Discussion	92	48.4	87	42.0
Games and other activities	14	7.4	34	16.4
Drama	10	5.3	15	7.2
Book	1	0.5	1	0.5

**Which is your main source of information about HIV/AIDS?** *(The questionnaire does not indicate that an interviewee can choose more than one answer, but the data show that some interviewees selected more than one answer.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Radio	59	24.6	61	25.3
Television	74	30.8	68	28.2
Friends	37	15.4	55	22.8
Classroom	124	51.7	125	51.9
Extracurricular activities (clubs, etc)	71	29.6	54	22.4
Health center	33	13.8	33	13.7
Relatives	28	11.7	40	16.6
Church	5	2.1	3	1.2
Magazine	3	1.3	6	2.5
Books	2	0.8	7	2.9
People in streets	2	0.8	0	0.0
World Vision	1	0.4	1	0.4
Peer Educators	3	1.3	1	0.4

**Do you feel you have enough information to protect yourself from HIV?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	134	55.8	142	58.9
No	104	43.3	97	40.2
Don't Know	0	0.0	1	.4
No Response	2	.8	1	.4
Total	240	100.0	241	100.0

**Would you like more information about HIV?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	225	93.8	227	94.2
No	12	5.0	14	5.8
No Response	3	1.3	0	0.0
Total	240	100.0	241	100.0

**Where would you like to receive that information?** *(The statistics are based on students answer "Yes" and "No Response" to the previous question.)*

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Health clinic	55	24.1	45	19.8
Anti-AIDS club	17	7.5	15	6.6
Church	14	6.1	22	9.7
School	176	77.2	175	77.1
T.V.	23	10.1	22	9.7
Home	29	12.7	23	10.1
Friends	16	7.0	24	10.6
Radio	21	9.2	24	10.6
Community members	11	4.8	7	3.1
Anywhere	6	2.6	3	1.3
Relatives	17	7.5	16	7.0
Magazines/books	10	4.4	12	5.3
Peers	4	1.8	0	0.0

## Appendix B

**CHANGES2 Community Health and Nutrition, Gender and Education Support  
Teacher Questionnaire Results**

	<u>Intervention</u> (total n=99)		<u>Comparison</u> (total n=91)	
	n	%	n	%
<b>PROVINCE</b>				
Central	24	(24.2%)	24	(26.4%)
Copperbelt	24	(24.2%)	24	(26.4%)
Lusaka	22	(22.2%)	24	(26.4%)
Southern	29	(29.3%)	19	(20.9%)
<b>LOCALITY</b>				
Urban	40	(40.4%)	34	(37.4%)
Rural	59	(59.6%)	57	(62.6%)
<b>TYPE</b>				
Middle Basic	17	(17.2%)	20	(22.0%)
Upper Basic	82	(82.8%)	71	(78.0%)
<b>GOV/COMM</b>				
Government	87	(87.9%)	87	(95.6%)
Community	4	( 4.0%)	0	( 0.0%)
Grant-aided	8	( 8.1%)	4	(4.54%)
<b>GENDER</b>				
Male	52	(52.5%)	49	(53.8%)
Female	47	(47.5%)	42	(46.2%)
<b>TIME</b>				
20 Minutes	7	( 7.1%)	1	( 1.1%)
21-30	45	(45.5%)	49	(53.8%)
31-40	34	(34.3%)	29	(31.9%)
41-50	11	(11.1%)	9	( 9.9%)
over 50minites	2	( 2.0%)	2	( 2.2%)
no record	0	( 0.0%)	1	( 1.1%)







**How long have you been teaching?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
My first year	8	8.1	11	12.1
Between 1 and 3 years	6	6.1	6	6.6
4-10 years	50	50.5	27	29.7
More than 10 years	35	35.4	47	51.6
Total	99	100.0	91	100.0

**What teaching qualifications do you have? (Respondents could choose more than one option)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
ZATEC graduate	12	12.1	17	18.7
ZATEC School-based year	10	10.1	6	6.6
Zambia Primary Course (ZPC)	33	33.3	34	37.4
Primary Diploma	18	18.2	17	18.7
Secondary Diploma	14	14.1	15	16.5
ZEBC	29	29.3	23	25.3
Zatec Trainig	4	4.0	5	5.5

**In the past how often did you attend training workshops away from school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Never	23	23.2	17	18.7
Once a term	20	20.2	26	28.6
Once a year	33	33.3	26	28.6
Once every two years	1	1.0	0	0.0
Other	22	22.2	22	24.2
Total	99	100.0	91	100.0

**How often are Teacher Group Meetings scheduled at your school?**

	intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Never	5	5.1	6	6.6
Once a month	9	9.1	14	15.4
Twice a month	9	9.1	9	9.9
Once a Term	2	2.0	2	2.2
Other	74	74.7	60	65.9
Total	99	100.0	91	100.0

## Section 2: Health and Illness

**What are the common illnesses that children in your school suffer from?  
(Respondents could give multiple answers)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Malaria	77	77.8	82	90.1
Resp. Illness/coughing	26	26.3	22	24.2
Injury (wound)/sores	16	16.2	2	2.2
Headache	6	6.1	6	6.6
Scabies/rash	20	20.2	18	19.8
Bilharzias	9	9.1	6	6.6
Diarrhea	19	19.2	18	19.8
Common cold	6	6.1	2	2.2
Malnutrition	3	3.0	5	5.5
Stomach pains/abdominal illness	7	7.1	6	6.6
Fever/flu	8	8.1	5	5.5
Eye problems	5	5.1	3	3.3
HIV/AIDS	1	1.0	1	1.1
Sickle cell anemia	2	2.0	0	0.0
Nose bleed	0	0.0	4	4.4
STIs	0	0.0	2	2.2
Mumps	0	0.0	2	2.2
Intestinal worms	11	11.1	1	1.1
Epilepsy	2	2.0	1	1.1
Ear infection	1	1.0	0	0.0
No Response	1	1.0	0	0

**What do you do when a child comes to your class and is slightly ill? (Respondents could choose more than one option)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Refer to local health centre	42	42.4	40	44.0
Send the child home	40	44.0	35	38.5
Have other children take her/him home*	5	9.6**	3	6.1**
Call a parent or guardian to come	5	5.5	4	4.4
Treat at school	11	12.1	9	9.9
Other	7	7.7	16	17.6

\* The option, "Have other children take her/him home\*", is not listed in the Female Teacher Questionnaire.

\*\* The percentage is based on only male teachers.

**What do you do when a child comes to your class and is very ill? (Respondents could choose more than one option)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Refer to local health centre	66	66.7	55	60.4
Send the child home	10	11.0	20	22.0
Have other children take her/him home*	9	9.6**	5	10.2**
Call a parent or guardian to come	32	35.2	26	28.6
Treat at school	8	8.8	9	9.9
Other	9	9.9	14	15.4

\* The option, "Have other children take her/him home\*", is not listed in the Female Teacher Questionnaire.

\*\* The percentage is based on only male teachers.

**How often does someone from the health centre come to your school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Never	21	21.2	17	18.7
Once a year	38	38.4	32	35.2
Once in 6 months	7	7.1	5	5.5
Once in a term	18	18.2	25	27.5
Other	14	14.1	11	12.1
No response	1	1.0	0	0.0
Don't Know	0	0.0	1	1.1
Total	99	100	91	100

**In the past 6 months, what kind of activities did the health centre do at your school? (Respondents could choose more than one option.)**

*(The statistics are based on all the teachers EXCEPT those who answered, "Never", for the previous question.)*

	Intervention (n=78)		Comparison (n=74)	
	Frequency	Percent	Frequency	Percent
No health centre visit in the past 6 months	14	17.9	8	10.8
Immunizations	17	21.8	22	29.7
Child health week	1	1.3	4	5.4
De-worming	27	34.6	11	14.9
Physical screening	4	5.1	13	17.6
Giving presentation to pupils	22	28.2	19	25.7
Other	23*	29.5	20*	27.0

**What does your school do to promote children carrying food to school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Talk to children/Encourage children	35	35.4	27	29.7
Talk to parents at PTA	14	14.1	9	9.9
Talk to community members	1	1.0	0	0
Encourage pupils to buy from tuckshop	2	2.0	2	2.2
Give them some food	9	9.1	8	8.8
Given food from school garden	0	0.0	4	4.4
Nothing	36	36.4	38	41.8
Don't Know	2	2.0	2	2.2
No Response	0	0.0	1	1.1
Total	99	100.0	91	100.0

**Section 3: Sexual Attitudes: Girl/Boyfriend****Can people protect themselves from HIV?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	94	94.9	88	96.7
No	3	3.0	3	3.3
Don't know	1	1.0	0	0.0
No response	1	1.0	0	0.0
Total	99	100.0	91	100.0

**How can people protect themselves from HIV?**

(Statistics are based on all the teachers except those who answered "No" to the previous question. Respondents could choose more than one option.)

	Intervention (n=96)		Comparison (n=88)	
	Frequency	Percent	Frequency	Percent
Using a condom	69	71.9	64	72.7
Having one partner	54	56.3	46	52.3
Abstaining from Sex	83	86.5	74	84.1
Other	5	5.2	3	3.4

**Is it possible to get HIV through witchcraft?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	11	11.1	6	6.6
No	85	85.9	82	90.1
Don't know	3	3.0	3	3.3
Total	99	100.0	91	100.0

**Can a person get HIV through a mosquito bite?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	5	5.1	3	3.3
No	92	92.9	86	94.5
Don't know	2	2.0	2	2.2
Total	99	100.0	91	100.0

**Can you tell by looking if a person is infected with HIV?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	8	8.1	3	3.3
No	91	91.9	88	96.7
Total	99	100.0	91	100.0

**Do you think you will contract HIV?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	30	30.3	29	31.9
Maybe	31	31.3	24	26.4
No	37	37.4	36	39.6
Don't know	1	1.0	2	2.2
Total	99	100.0	91	100.0

**Why do you think you might get HIV?**

(Statistics are based on all the teachers except those who answered "No" to the previous question. Respondents could choose more than one option.)

	Intervention (n=62)		Comparison (n=55)	
	Frequency	Percent	Frequency	Percent
Don't always use condoms	8	12.9	1	1.8
Condoms break	1	1.6	1	1.8
Condoms are not 100% safe	2	3.2	3	5.5
Have more than one partner	3	4.8	4	7.3
Don't trust partners	29	46.8	22	40.0
Partner has other partners	13	21.0	6	10.9
Partner looks sick	1	1.6	0	0.0
Don't know past history of partner	6	9.7	3	5.5
Many ways of contracting -- injections, sharp objects, blood	15	24.2	15	27.3
Casual contact	1	1.6	3	5.5
Past history of behavior -- may already be positive	1	1.6	2	3.6
Caring for sick relative	3	4.8	2	3.6

**Why do you think you will not get HIV?**

(Statistics are based on the teachers who answered "No" to the previous question. Respondents could choose more than one option.)

	Intervention (n=37)		Comparison (n=36)	
	Frequency	Percent	Frequency	Percent
Abstains from sex	10	27.0	5	13.9
Uses condoms every time	2	5.4	0	0.0
Has only one sex partner	26	70.3	26	72.2
Limits number of sex partners	1	2.7	3	8.3
Partner looks healthy	0	0.0	1	2.8
Partner tested negative	1	2.7	0	0.0
Other	4	10.8	1	2.8

**If a student has HIV but is not sick, do you think he or she should be allowed to continue attending school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	99	100.0	90	98.9
No	0	100.0	1	1.1
Total	99	100.0	91	100.0

**If a teacher has HIV but is not sick, do you think he or she should be allowed to continue teaching in school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	99	100.0	88	96.7
No	0	0.0	1	1.1
No response	0	0.0	2	2.2
Total	99	100.0	91	100.0

**A girl who carries condoms in her purse cares about herself.**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Agree	73	73.7	54	59.3
Disagree	24	24.2	34	37.4
Don't know	1	1.0	1	1.1
No response	1	1.0	2	2.2
Total	99	100.0	91	100.0

**A girl will lose a man's respect if she requests that he use a condom.**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Agree	12	12.1	17	18.7
Disagree	85	85.9	74	81.3
No response	2	2.0	0	0.0
Total	99	100.0	91	100.0

**You can protect yourself from HIV/AIDS.**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Agree	96	97.0	88	96.7
Disagree	3	3.0	2	2.2
Don't Know	0	0.0	1	1.1
Total	99	100.0	91	100.0

**How many sexual partners do you think you will have in the future?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
None	10	10.1	7	7.7
One partner	87	87.9	77	84.6
Several at the same time	2	2.0	2	2.2
Other	0	0.0	1	1.1
Don't Know	0	0.0	4	4.4
Total	99	100.0	91	100.0

**Do you intend to use a condom every time you have sex?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	28	28.3	20	22.0
Sometimes	26	26.3	24	26.4
No	38	38.4	44	48.4
Other	2	2.0	0	0.0
Don't Know	0	0.0	1	1.1
No response	5	5.1	2	2.2
Total	99	100.0	91	100.0

**Why won't you use a condom every time you have sex?**

GROUP	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Reduces pleasures	9	12.7	3	4.2
Can break	0	0.0	1	1.4
Unsafe/Not 100% effective	3	4.2	3	4.2
Shows lack of trust in your partner	0	0.0	13	18.3
Causes itchiness/discomfort	3	4.2	0	0.0
Spoils the mood	1	1.4	0	0.0
Shows lack of trust in your partner	11	15.5	0	0.0
Only for family planning-may want a baby	15	21.1	16	22.5
Trusts partner	9	12.7	22	31.0
Catholic	1	1.4	0	0.0
Tested negative for HIV	2	2.8	0	0.0
No sexually active	1	1.4	2	2.8
Partner refused/doesn't like	4	5.6	2	2.8
Using condoms is not our culture	0	0.0	1	1.4
Don't Know	2	2.8	0	0.0
No Response	10	14.1	8	11.3
Total	71	100.0	71	100.0

**Section 4: Self-Efficacy****Question for Both Male and Female Teachers:****Insist on a condom use during sex even if your partner does not want to use one?****Male Teachers:**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Very confident	36	69.2	29	59.2
Somewhat confident	6	11.5	10	20.4
Not very confident	7	13.5	6	12.2
Not at all confident	2	3.8	3	6.1
No response	1	1.9	0	0.0
Don't Know	0	0.0	1	2.0
Total	52	100.0	49	100.0

**Female Teachers:**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Very confident	24	51.1	25	59.5
Somewhat confident	11	23.4	6	14.3
Not very confident	7	14.9	5	11.9
Not at all confident	3	6.4	4	9.5
No response	2	4.3	0	0.0
Don't know	0	0.0	2	4.8
Total	47	100.0	42	100.0

**Questions Only for Male Teachers:****How easy or difficult is it for a girl to refuse to have sex with her teacher if he demands sex?**

	Intervention		comparison	
	Frequency	Percent	Frequency	Percent
Easy	14	26.9	11	22.4
Somewhat easy	8	15.4	5	10.2
Somewhat difficult	16	30.8	14	28.6
Very difficult	12	23.1	18	36.7
Don't know	2	3.8	1	2.0
Total	52	100.0	49	100.0



**Do you think a woman can refuse to have sex with a man who has given her money or gifts and wants to have sex?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	25	48.1	19	38.8
No	26	50.0	29	59.2
Don't know	1	1.9	1	2.0
Total	52	100.0	49	100.0

**Can a woman refuse to have sex with her supervisor, if he demands that she have sex with him?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	40	76.9	37	75.5
No	12	23.1	10	20.4
Don't know	0	0.0	2	4.1
Total	52	100.0	49	100.0

**Questions for Female Teachers:**

**Would you accept to have sex with someone who cares for you, even if you don't want to?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	7	14.9	2	4.8
Maybe	2	4.3	0	0.0
No	38	80.9	40	95.2
Total	47	100.0	42	100.0

**Do you think you can exchange sex for financial support?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
No	47	100.0	42	100.0
Total	47	100.0	42	100.0

**Would you accept to have sex with your supervisor if he demanded?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
No	46	97.9	42	100.0
No response	1	2.1	0	0.0
Total	47	100.0	42	100.0

**How confident are you that you would be able to choose with whom to have sex?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Very confident	46	97.9	39	92.9
Somewhat confident	1	2.1	2	4.8
Not at all confident	0	0.0	1	2.4
Total	47	100.0	42	100.0

**How confident are you that you would be able to avoid sex any time you didn't want it?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Very confident	34	72.3	35	83.3
Somewhat confident	7	14.9	5	11.9
Not very confident	6	12.8	2	4.8
Total	47	100.0	42	100.0

## Section 5: Textbooks and Learning Aids

**How often do you use textbooks to prepare lessons?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Always	91	91.9	85	93.4
Once a week	2	2.0	1	1.1
2-3 times per term	2	2.0	0	0.0
Rarely	2	2.0	2	2.2
Other	1	1.0	3	3.3
No response	1	1.0	0	0.0
Total	99	100.0	91	100.0

**How often do learners use textbooks in your classroom?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Each lesson	39	39.4	42	46.2
2-3 times a week	38	38.4	21	23.1
Once a week	5	5.1	9	9.9
2-3 times per term	0	0.0	1	1.1
Once per term	1	1.0	0	0.0
Never use textbooks	8	8.1	7	7.7
Other	7	7.1	10	11.0
No response	1	1.0	0	0.0
Don't Know	0	0	1	1.1
Total	99	100.0	91	100.0

**Where are learners' textbooks kept when they are not being used?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Principal's office	27	27.3	33	36.3
Staff room	16	16.2	9	9.9
Classroom	28	28.3	26	28.6
With learners	1	1.0	1	1.1
Don't have textbooks	4	4.0	6	6.6
Other	21	21.2	16	17.6
No response	2	2.0	0	0.0
Total	99	100.0	91	100.0

**How easy is it for you to have access to textbooks for your classroom?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Textbooks are kept with me	25	25.3	26	28.6
Locked and easy to get key	58	58.6	49	53.8
Locked and difficult to get key	6	6.1	5	5.5
No locked but it is a complicated process to get them	1	1.0	1	1.1
Other	6	6.1	7	7.7
No response	3	3.0	3	3.3
Total	99	100.0	91	100.0

**In addition to textbooks what other kinds of teaching aids do you use? (Respondents could choose more than one option.)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Maps	35	35.4	31	34.1
Globes	5	5.1	1	1.1
Mathematics sets	1	1.0	4	4.4
Posters	58	58.6	61	67.0
Crayons or colored chalk	10	10.1	9	9.9
Mathematics counters	6	6.1	2	2.2
Story books	9	9.1	16	17.6
Science kits	26	26.3	30	33.0
Traditional crafts	24	24.2	23	25.3
Other	60	60.6	51	56.0

**Section 6: Classroom Management****How many materials are there in your classroom, such books, posters, learning tools, etc?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Many	26	26.3	28	30.8
Some	30	30.3	26	28.6
Few or None	42	42.4	36	39.6
No response	1	1.0	1	1.1
Total	99	100.0	91	100.0

**How tidy is your classroom?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
very tidy	24	24.2	27	29.7
Somewhat tidy	52	52.5	52	57.1
Somewhat messy	15	15.2	10	11.0
Very messy	6	6.1	0	0.0
No response	2	2.0	2	2.2
Total	99	100.0	91	100.0

**How would you describe your classroom atmosphere? (Respondents could choose more than one option.)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Friendly and enjoyable	63	63.6	70	76.9
Caring	26	26.3	23	25.3
Focused on learning	27	27.3	38	41.8
Boring	1	1.0	3	3.3
Chaotic	7	7.1	3	3.3
Frustrating	14	14.1	8	8.8
Other	5	5.1	5	5.5

**Other than school rules, do you have rules for your class?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	89	89.9	85	93.4
No	9	9.1	6	6.6
No response	1	1.0	0	0.0
Total	99	100.0	91	100.0

**How were the class rules developed?**

(Statistics are based on all the teachers except those who answered "No" to the previous question.)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Developed by myself	21	23.3	28	32.9
Developed with my students	64	71.1	54	63.5
Developed by the headteacher	2	2.2	1	1.2
Developed by the PTA	0	0.0	1	1.2
Other	2	2.2	1	1.2
No response	1	1.1	0	0.0
Total	90	100.0	85	100.0

**What is the purpose of your class rules?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Keep students from misbehaving	48	53.3	42	49.4
Maintain a good learning environment	35	38.9	39	45.9
Guide and protect students	6	6.7	4	4.7
No response	1	1.1	0	0.0
Total	90	100.0	85	100.0

**Section 7: Teaching Methods**

**What teaching methods do you use most often in your classroom? (Can choose more than one option.)**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Put Notes on board for learners to copy	19	19.2	13	14.3
Ask whole class questions	36	36.4	38	41.8
Lecture	24	24.2	26	28.6
Provide time for learner to ask questions of the teacher	26	26.3	29	31.9
Give learners problems to solve	26	26.3	23	25.3
Learners practicing skills	23	23.2	14	15.4
Go on field trips	11	11.1	17	18.7
Guest teachers from the community	3	3.0	1	1.1
Allowing learners to discuss among themselves	82	82.8	68	74.7
Other	20	20.2	33	36.3

**What is the most common type of assessment you give to learners?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Fill in the blank questions	23	23.2	30	33.0
Multiple choice questions	34	34.3	27	29.7
Other	42	42.4	34	37.4
Total	99	100.0	91	100.0

**How often do you mark student's work?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Never	2	2.0	0	0.0
Ever day	85	85.9	79	86.8
2-3 times per week	6	6.1	3	3.3
Once per week	1	1.0	2	2.2
Other	5	5.1	7	7.7
Total	99	100.0	91	100.0

**Do you think it is good for learners to ask questions of the teacher?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Yes	98	99.0	91	100.0
No	1	1.0	0	0.0
Total	99	100.0	91	100.0

**What do you do when learners ask you a question that you do not know the answer?**

(Can choose more than one option, but the data show each interview only choose one option.)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Tell them I don't know the answer	6	6.1	8	8.8
Ignore it	1	1.0	0	0.0
Learners do not ask questions	1	1.0	1	1.1
Give as homework	22	22.2	15	16.5
Ask the class	19	19.2	11	12.1
Find answer and come back later	38	38.4	40	44.0
Postpone the question	3	3.0	1	1.1
Ask other teachers	8	8.1	12	13.2
No serious questions	0	0.0	1	1.1
I always know the answer	1	1.0	2	2.2
Total	99	100.0	91	100.0



**Section 8: Time on Task****How long are the school periods at your school?**

	Intervention		Comparison	
	Frequency	Percent		
30 minutes	20	20.2	15	16.5
35 minutes	3	3.0	0	0.0
40 minutes	76	76.8	72	79.1
Other	0	0.0	4	4.4
Total	99	100.0	91	100.0

**How often do you start teaching on time?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Always	46	46.5	51	56.0
3 times a day	11	11.1	3	3.3
Once a day	2	2.0	1	1.1
2-3 times a week	14	14.1	6	6.6
Once a week	0	0.0	2	2.2
Rarely	9	9.1	8	8.8
Other	17	17.2	20	22.0
Total	99	100.0	91	100.0

**When you do not start lessons on time, what might be the reason?**

(Statistics are based on all the teachers except those who answered "Yes" to the previous question.)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Making papers in the staff room	1	1.9	2	5
Meeting with the head teacher	14	26.4	9	22.5
Meeting with other teachers	9	17.0	2	5
Meeting with parents or community members	3	5.7	1	2.5
In town or the village taking care of personal business	9	17.0	2	5
Speaking with students	3	5.7	3	7.5
Organizing materials for the lesson	5	9.4	5	12.5
Pupils arrive late	9	17.0	7	17.5
Staff meetings	1	1.9	1	2.5
Assemblies	9	17.0	15	37.5
Traveling from home	3	5.7	2	5
Administrative duties	1	1.9	0	0
Class being cleaned	1	1.9	1	2.5
Rains	1	1.9	0	0
Previous class still meeting	7	13.2	3	7.5
Taking care of sick pupil	1	1.9	0	0
Caring for my children	1	1.9	0	0

**How often do you finish your teaching on time?**

	Intervention		Comparison	
	Frequency	Percent		
Always	31	31.3	30	33.0
3 times a day	8	8.1	6	6.6
Once a day	3	3.0	6	6.6
2-3 times a week	14	14.1	10	11.0
Once a week	1	1.0	4	4.4
Rarely	24	24.2	21	23.1
Other	17	17.2	13	14.3
No response	1	1.0	1	1.1
Total	99	100.0	91	100.0

**How often are you absent from school?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Never	37	37.4	48	52.7
Once per term	14	14.1	13	14.3
Once per month	30	30.3	17	18.7
Once per week	1	1.0	0	0.0
Other	15	15.2	11	12.1
Don't know	0	0.0	1	1.1
No response	2	2.0	1	1.1
Total	99	100.0	91	100.0

**How often do you substitute one subject for another?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Every day	2	2.0	2	2.2
Once a week	32	32.3	19	20.9
Once a month	3	3.0	6	6.6
Never	46	46.5	44	48.4
Other	16	16.2	16	17.6
No response	0	0.0	4	4.4
Total	99	100.0	91	100.0

**Which subject do you normally substitute/leave out?**

(Statistics are based on all the teachers except those who answered "Never" to the previous question.)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
P.E.	14	26.4	12	25.5
Local language	7	13.2	5	10.6
Social Studies	2	3.8	6	12.8
Literacy	3	5.7	5	10.6
Geography	0	0.0	2	4.3
Science	3	5.7	1	2.1
SME	1	1.9	0	0.0
Math	3	5.7	0	0.0
Home Economics	6	11.3	3	6.4
Community studies	3	5.7	4	8.5
Music	4	7.5	2	4.3
Art & Design	7	13.2	2	4.3
Creative & Technology	4	7.5	7	14.9
Health Education	0	0.0	1	2.1
English	3	5.7	0	0.0
Religious education	3	5.7	5	10.6
History	0	0.0	2	4.3
Civics	0	0.0	1	2.1

**How many periods are timetabled for you to teach in a week?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
1-10	2	2.0	4	4.4
11-20	9	9.1	12	13.2
21-30	54	54.5	40	44.0
31-40	27	27.3	32	35.2
41-50	5	5.1	2	2.2
50 or above	2	2.0		0.0
No Response	0	0.0	1	1.1
	99	100.0	91	100.0

**Of that number how many periods do you NOT teach during a week?**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	40	40.4	43	47.3
1	16	16.2	13	14.3
2	14	14.1	12	13.2
3	3	3.0	5	5.5
4	11	11.1	3	3.3
5	6	6.1	4	4.4
7	1	1.0	0	0.0
8	1	1.0	0	0.0
10	2	2.0	5	5.5
14	1	1.0	0	0.0
23	0	0.0	1	1.1
25	0	0.0	1	1.1
30	1	1.0	1	1.1
40	1	1.0	0	0.0
Don't Know	2	2.0	2	2.2
No Response	0	0.0	1	1.1
Total	99	100.0	91	100.0

**Of that number how many periods do you NOT teach during a week?**

(Statistics are based on all the teachers except those who answered "0" to the previous question. Can choose more than one answer)

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
I am tired	1	1.7	2	4.2
It is hot	1	1.7	1	2.1
I am marking papers	0	0.0	2	4.2
I am preparing lessons	2	3.4	5	10.4
I am organizing school activities	15	25.4	12	25.0
I am in town or in the village taking care of personal matters	5	8.5	1	2.1
I am at home	1	1.7	2	4.2
Staff meetings	3	5.1	7	14.6
Assemblies	2	3.4	2	4.2
Not enough rooms	2	3.4	5	10.4
Understaffing	5	8.5	1	2.1
Some subjects not important	0	0.0	2	4.2
Board meetings	0	0.0	1	2.1
No P.E. kits	2	3.4	1	2.1
Previous lesson not finished	8	13.6	5	10.4
Sports	0	0.0	1	2.1
Rain season	2	3.4	2	4.2
Students already know material	0	0.0	1	2.1
Sick	2	3.4	0	0.0
Taught by student teachers	1	1.7	0	0.0
I don't like the subject	1	1.7	0	0.0
Lack of facilities/materials	4	6.8	0	0.0
Scheduling clashes	1	1.7	0	0.0
Subject not time-tabled	1	1.7	0	0.0
Teach those that are examinable	1	1.7	0	0.0
Not trained for this subject	1	1.7	0	0.0
Learners are too slow	2	3.4	0	0.0

## Appendix C

**CHANGES2 Community Health and Nutrition, Gender and Education Support  
Classroom Observation Preliminary Results**

	<u>Intervention</u> (total n=74)		<u>Comparison</u> (total n=69)	
	n	%	n	%
<b>PROVINCE</b>				
Central	17	(23.0%)	18	(26.1%)
Copperbelt	18	(24.3%)	18	(26.1%)
Lusaka	21	(28.4%)	15	(21.7%)
Southern	18	(24.3%)	18	(26.1%)
<b>LOCALITY</b>				
Urban	24	(32.4%)	19	(27.5%)
Rural	50	(67.6%)	50	(72.5%)
<b>TYPE</b>				
Lower Basic	3	( 4.1%)	3	( 4.3%)
Middle Basic	18	(24.3%)	24	(34.8%)
Upper Basic	53	(71.6%)	42	(60.9%)
<b>GOV/COMM</b>				
Government	66	(89.2%)	66	(95.7%)
Community	3	( 4.1%)	0	( 0.0%)
Grant-aided	5	( 6.8%)	3	( 4.3%)
<b>GENDER</b>				
Male	37	(50.0%)	42	(60.9%)
Female	37	(50.0%)	25	(36.2%)
No Response			2	( 2.9%)
<b>TIME</b>				
20 Minutes	1	( 1.4%)	2	( 2.9%)
21-30	11	(14.9%)	9	(13.0%)
31-40	47	(63.5%)	42	(60.9%)
41-50	4	( 5.4%)	8	(11.6%)
51-60	5	( 6.8%)	2	( 2.9%)
Over 60 minutes	5	( 6.8%)	1	( 1.4%)
no record	1	( 1.4%)	5	( 7.2%)

	<u>Intervention</u> (n=74)		<u>Comparison</u> (n=69)	
	n	%	n	%
<b>DISTRICT</b>				
Chbombo	3	(4.1%)	3	(4.3%)
Kabwe	3	(4.1%)	3	(4.3%)
Kapiri Mposhi	2	(2.7%)	3	(4.3%)
Mkushi	3	(4.1%)	3	(4.3%)
Mumbwa	3	(4.1%)	3	(4.3%)
Serenje	3	(4.1%)	3	(4.3%)
Chlalabombwe	3	(4.1%)	0	(0.0%)
Chingola	3	(4.1%)	3	(4.3%)

Luanshya	3	(4.1%)	3	(4.3%)
Masaiti	2	(2.7%)	3	(4.3%)
Mpongwe	3	(4.1%)	3	(4.3%)
Mufulira	1	(1.4%)	3	(4.3%)
Ndola	3	(4.1%)	3	(4.3%)
Chongwe	6	(8.1%)	3	(4.3%)
Lusaka	6	(8.1%)	6	(8.7%)
Luangwa	6	(8.1%)	0	(0.0%)
Kafue	3	(4.1%)	6	(8.7%)
Choma	3	(4.1%)	3	(4.3%)
Kalomo	3	(4.1%)	3	(4.3%)
Kazungula	6	(8.1%)	3	(4.3%)
Livingstone	3	(4.1%)	6	(8.7%)
Mazabuka	3	(4.1%)	3	(4.3%)

**Teacher Position**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
SIC or SIP	15	20.3	12	17.4
Senior Teacher	16	21.6	15	21.7
Other	42	56.8	42	60.9
NO Response	1	1.4	0	0.0
Total	74	100.0	69	100.0

**QUALIFICATION**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
ZATEC	8	10.8	12	17.4
Pre-school	1	1.4	0	0.0
PTDDL-NISTECO	0	0.0	2	2.9
ZBEC	11	14.9	14	20.3
Other Diploma	3	4.1	2	2.9
ZPC	9	12.2	15	21.7
Certificate in education	12	16.2	9	13.0
Primary Diploma	28	37.8	13	18.8
Secondary Diploma	1	1.4	1	1.4
No Response	1	1.4	1	1.4
Total	74	100.0	69	100.0

**Year of Experience**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
1-3 years	5	6.8	10	14.5
4-10 years	33	44.6	22	31.9
More than 10 years	28	37.8	32	46.4
Less than 1 year	1	1.4	2	2.9
No Response	7	9.5	3	4.3
Total	74	100.0	69	100.0

**Grade**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
1	2	2.7	5	7.2
2	3	4.1	2	2.9
3	1	1.4	3	4.3
4	15	20.3	15	21.7
5	5	6.8	3	4.3
6	1	1.4	4	5.8
7	22	29.7	17	24.6
8	7	9.5	3	4.3
9	18	24.3	17	24.6
Total	74	100.0	69	100.0

**# of Learners, Boys, and Girls**

	Intervention				Comparison			
	N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
Learners	73*	14	98	39.71	68*	15	114	42.53
Boys	73	0	49	19.36	68	0	60	22.91
Girls	73	0	49	20.27	68	0	63	19.62

\*There is one school in each group that does not have data on these variables.

**PRE-CONFERENCE. Ask to see lesson plan. Ask for lesson file to see if the lesson being taught is in the appropriate sequence.**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
Lesson plan available	22	29.7	15	21.7
Lesson plan available and in the right sequence	17	23.0	15	21.7
Lesson plan available and not in right sequence	0	0.0	2	2.9
No lesson plan available	19	25.7	18	26.1
Teacher not prepared	2	2.7	4	5.8
Lesson late due to school feeding	1	1.4	0	0.0
Same lesson presented previously	2	2.7	4	5.8
Finishing previous lesson	0	0.0	3	4.3
Well prepared	3	4.1	3	4.3
Lesson plan not completed	7	9.5	4	5.8
No Response	1	1.4	1	1.4
Total	74	100.0	69	100.0

**SUBJECT**

	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
English	15	20.3	19	27.5
Maths	27	36.5	23	33.3
Social Studies	11	14.9	8	11.6
Science/Environmental	14	18.9	12	17.4
Literacy	3	4.1	2	2.9
Geography	1	1.4	2	2.9
Religious Education	1	1.4	1	1.4
Civics	1	1.4	2	2.9
History	1	1.4	0	0.0
Total	74	100.0	69	100.0

**Lesson Topic (Intervention Group Only)**

*If a lesson topic appears more than once in the dataset, its frequency is presented in the parentheses.*

English	Comparison Comprehension (2) Comprehension (A day with a fish buyer) Comprehension (listening) Good health Language practice (had/hadn't) Past perfect tense Question tags Reading Reading Singular/plural Structure Structure Structuring (-ing form participle)
Maths	Adding using expanded notation Addition (2) Angles in a triangle Comparisons Discount Equal sets Expanded notation and addition Expanded notation Fractions Fractions Greater than and less than Index notation Multiples (2) Multiplication Natural and whole numbers Number Numeration Numeracy and notation Numbers Numeracy Place values (2) Sets Sets (venn diagram) Subtraction (2)



Social Studies	Battle against diabetes Christianity Famous world leaders Farming around the world Institutions that help the needy. Living together Provinces The family World population World problems Worlds major religions
Science/Environmental	Changes of state Earthworms Farming cooperatives Female reproductive organs Flower Food security Life cycle of a butterfly Plants (3) Reproduction Seed dispersal Solar eclipse Universe
Literacy	Literacy Silent letters the letter "r"
Geography	Equatorial regions
Religious Education	Religion (how we learn)
Civics	Indicators of development
History	Lunda-Luba dispersal

**Lesson Topic (Comparison Group Only)**

English	A day with a fish buyer Adverbs of frequency Composition Comprehension Comprehension (listening) Drug abuse (2) Lightning Literacy Literature in English Making friends Pathway Reading (2) Speech Speech work Spoken English Telling time Word power and language practice
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Maths	Addition (3) Bases Fractions Indices Linear Equations with Maths variables Matching Multiplication (3) Notations and Roman Numerals Numberation Numbers up to 10 addition Numeration and notation (3) Place values Ratio Rule and compass construction Sets (3)
Social Studies	Government Living together Living together: population growth and food production National flag National symbols Our population Work and health World Religions
Science/Environmental	Crop production Electricity Flower Life cycle of insects More about senses Radio transmission Soil erosion (2) Testing for starch Universe and planets Weather Where insects come from
Literacy	Initial letter sounds
Geography	Equatorial rain forests Equatorial regions
Religious Education	Hindu marriages
Civics	Benefits from industries Citizenship

**Component 1. Use of a Variety of Teaching Strategies**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Teacher does not use strategies that involve learners.	11	14.9	11	15.9
2	Teacher uses 1 strategy that involves learners.	12	16.2	11	15.9
3	Teacher uses 1 or 2 strategies that involve learners.	41	55.4	39	56.5
4	Teacher uses more than 2 strategies that involve learners.	8	10.8	6	8.7
	No Response	2	2.7	2	2.9
	Total	74	100.0	69	100.0

Codes	Description	Intervention	Comparison
1	Learners work in groups	13	10
2	Teacher calls pupil to board	9	5
3	Teacher asks questions of learners	39	30
4	Learners copy from board	10	8
5	Learners read from board	2	2
6	Teacher explains and talks to learners	23	31
7	Teacher demonstrates on chalkboard	2	8
8	Teacher demonstrates using other teaching aids	3	3
9	Learners reading silently in groups	1	1
10	Learner exercises	18	15
11	Learners memorizing	0	1
12	Class discussion	8	7
13	Teacher reads story to pupils	0	1
14	Flash cards	2	1
15	Pupils play educational game	0	1
16	Song	1	2
17	Teacher supports groups	0	1
18	Few pupils read aloud	1	1
19	Spelling test	1	0
20	Pupils moved outside class to study environment	0	2
21	Teacher talking to himself or the board	0	1
22	Teacher read from textbook	1	1

**Component 2. Classroom Arrangement**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Classroom arrangement is chaotic and doesn't foster learning.	2	2.7	2	2.9
2	Desks have no proper arrangement and difficult for learners to work together	10	13.5	5	7.2
3	Desks may have an original arrangement but it has not been maintained	22	29.7	16	23.2
4	Desks are arranged (or children are sitting) in an orderly fashion for ease of getting learners to discuss and work together.	35	47.3	41	59.4
	No Response	5	6.8	5	7.2
	Total	74	100.0	69	100.0

Codes	Description	Intervention	Comparison
1	Standard MOE arrangement	30	38
2	Furniture was adequate	2	0
3	Not enough furniture for learners	7	3
4	Disorganized room	6	6
5	Room had carpet for learners to sit on	1	0
6	Desks arranged in rows	18	12
7	Learners rearranged desk for group work during the lesson	1	1
8	Teaching stations around room	1	0
9	Some learners facing away from teacher	1	0

**Component 3. Use of Materials by Learners**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	No materials available for learners.	44	59.5	34	49.3
2	A few learners manipulate while others watch.	10	13.5	12	17.4
3	Most learners share and manipulate all material.	11	14.9	13	18.8
4	Learners share and all manipulate materials in groups.	8	10.8	8	11.6
	No Response	1	1.4	2	2.9
	Total	74	100.0	69	100.0

Codes		Intervention	Comparison
1	Textbooks	17	16
2	Readers	1	0
3	Science equipment	0	1
4	Maps, charts, posters	1	0
5	Sticks, stones, or other counters (maths)	1	0
6	Plants, soil, flowers, or other object that can be found in the local environment	2	2
7	Real object that is discussed in lesson	2	1
8	PRP books	0	1
9	Word cards	0	2
10	Materials available in class but not utilized	2	0
11	Pamphlet	1	0
12	Workbooks	1	1

**Component 4. Use of Materials by Teachers to Enhance Learning**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Use no materials/materials do not enhance learning.	26	35.1	15	21.7
2	Use 1 kind of material to enhance learning.	29	39.2	42	60.9
3	Use 2 kinds of materials to enhance learning.	13	17.6	7	10.1
4	Uses more than 2 kinds of materials to enhance learning.	4	5.4	5	7.2
	No Response	2	2.7	69	100.0
	Total	74	100.0		

Codes	Use of Materials by Teachers	Intention	Comparison
1	Textbooks	30	24
2	Readers	0	0
3	Science equipment	0	1
4	Maps, charts, posters	19	17
5	Sticks, stones, or other counters	6	6
6	Plants, soil, flowers, or other object that can be found in the local environment	12	9
7	Real object that is discussed in lesson	2	13
8	Chalkboard	19	15
9	Word cards / number cards	2	13
10	PRP books	0	11
11	Work books	1	13
12	Teachers book	14	13
13	Dictionary	1	14
14	Teacher's notes	15	16

**Component 5. Grouping of Learners**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Whole class only (no group)	34	45.9	21	30.4
2	Uses permanent groups with or without assigned roles	23	31.1	33	47.8
3	Uses flexible groups without assigned roles	4	5.4	8	11.6
4	Uses flexible groups and assigned roles	12	16.2	5	7.2
	No Response	1	1.4	2	2.9
	Total	74	100.0	69	100.0

Codes	Grouping Learners	Intervention	Comparison
1	Ability grouping	6	9
2	Grouping by gender	3	0
3	No apparent strategy for grouping	1	5
4	No grouping of learners	9	5
5	Mixed ability groups	2	6
6	Pairs	2	1

**Component 6. Learners Work in Groups**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Learners sit in groups but work as individuals	28	37.8	33	47.8
2	Only one or two learners in the group interact	5	6.8	6	8.7
3	Groups of learners with limited interaction	8	10.8	11	15.9
4	Groups of learners discuss problems, questions and activities	8	10.8	5	7.2
	No Response	25	33.8	14	20.3
	Total	74	100.0	69	100.0

Codes	Size of group	Intervention	Comparison
1	2-4	7	6
2	5-8	54	57
3	9-15	12	15
4	More than 15 in a group	12	9
5	Learners' work in groups	4	2
6	Evidence of creative group work.	1	0
7	Learners sit in groups but work as individuals.	0	1
8	Learners do not sit in groups.	1	1

**Component 7. Types of Learner Activities**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Teacher talks, learners listen to teacher	13	17.6	9	13.0
2	Learner involved in teacher-directed activities	49	66.2	56	81.2
3	Learners involved only in sharing ideas	4	5.4	2	2.9
4	Learners involved in discussions and problem-solving and/or creative activities	8	10.8	2	2.9
	Total	74	100.0	69	100.0

Codes	Types of Learning Activities	Intervention	Comparison
1	Learners work in groups	9	2
2	Learners work at chalk board	6	4
3	Learner answers teachers questions	14	12
4	Learners copy from board	7	7
5	Learners read from board	0	1
6	Learners listen to teacher	14	10
7	Learners watch teacher demonstration	2	3
8	Learners reading silently	3	1
9	Learners work in groups manipulating materials.	1	1
11	Learners discuss and come up with group answers	8	3
12	Groups of learners are given different tasks	2	0
13	Learners recall from previous lesson	1	0
14	Some learners slept	1	0
15	Learners do exercises individually	16	15
16	Learners copy from book	1	2

**Component 8. Teacher Questioning Skills**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Teacher asks no questions	3	4.1	6	8.7
2	Asks simple recall, oral fill-in-the blank or close ended questions.	44	59.5	33	47.8
3	Asks mostly close-ended questions and 1 or 2 open ended questions.	11	14.9	18	26.1
4	Teacher asks a variety of questions, including open ended questions that probe for learners' understanding.	16	21.6	12	17.4
	Total	74	100.0	69	100.0

Codes		Intervention	Comparison
1	Teacher uses fill-in-the-blank oral questioning.	6	3
2	Teacher questions focus on recall of facts	10	6
3	Teacher questions focus on one word answers.	1	0
4	Teacher asks learners for their opinions.	1	0
5	Teacher asks learners to solve problems	1	2
6	Teachers ask learners to hypothesize (What if...?)	0	0
7	Teachers ask learners about their own knowledge and experience	0	1
8	Open-ended questions	8	6
9	Probing questions	7	8
10	Simple questions	14	6
11	Teacher answered own questions	1	2
12	Some questions not clear	1	2

**Component 9. Learners Asking Questions**

		Frequency	Percent	Frequency	Percent
1	Learners ask no questions.	66	89.2	63	91.3
2	Learners ask simple questions only.	4	5.4	3	4.3
3	Learners ask questions that show they are thinking only when teacher encourages.	2	2.7	2	2.9
4	Learners ask questions which show thinking even without teacher's encouragement	2	2.7	1	1.4
Total		74	100.0	69	100.0

Codes		Intervention	Comparison
1	Learners ask questions of teacher to clarify understanding of a concept	1	2
2	Learners ask questions of teacher to clarify an assignment	1	
3	Learners ask questions of each other	1	
4	Learners do not ask questions	63	59
5	Communicative approach	1	

**C10. HIV/AIDS Integration**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Lesson contains no HIV/AIDS component.	71	95.9	64	92.8
2	Lesson contains HIV/AIDS message at the end of lesson not connected to topic.	1	1.4	0	0.0
3	Lesson contains HIV/AIDS component but not connected to topic.	0	0.0	1	1.4
4	Lesson contains HIV/AIDS component connected to topic being taught.	2	2.7	3	4.3
No Response		0	0.0	1	1.4
Total		74	100.0	69	100.0

Codes		Intervention	Comparison
1	Teacher makes connections to HIV/AIDS in lesson although it was not planned	0	0
2	Learners recite slogans	1	0
3	HIV/AIDS mentioned briefly	1	1
4	Link between poverty and infection	0	1
5	Discussed casual contact and safety	0	1
6	Addressed stigma	0	1

**Component 11. HIV/AIDS Methodology** *(Skip this if lesson contains no HIV/AIDS content)*

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Teacher asks learners to recall basic factual information about HIV/AIDS	2	100.0	2	66.7
4	Teacher uses more than 1 strategy to stimulate discussion among learners about HIV/AIDS topics that go beyond factual information	0	0.0	1	33.3
total		2	100.0	3	100.0

Codes	HIV/AIDS Methodology	Intervention	Comparison
1	Very brief	1	1
3	Class discussion	0	1



**Component 12. Time-on-Task**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Learners are not engaged in learning activities during this lesson.	6	8.1	3	4.3
2	Learners have long periods of not being engaged in learning activities during the lesson.	19	25.7	21	30.4
3	Learners have short periods of not being engaged in learning activities in the lesson.	28	37.8	15	21.7
4	Learners are fully engaged in learning activities the entire lesson.	18	24.3	27	39.1
No Response		3	4.1	3	4.3
Total		74	100.0	69	100.0

Codes		Intervention	Comparison
1	Teacher used entire period	0	2
2	Teacher marking work during class	6	5
3	Teacher writing on board	4	3
4	Students visiting with each other / playing	1	6
5	Students off task	2	2
6	Instructions not clear	0	1
7	Time well-utilized	6	7
8	Teacher busy with some students; others unsupervised	2	1
9	Groups too large for all to participate	3	1
10	Teacher gave work but provided no support	1	1
11	Teacher in and out of classroom during learning time	0	1
12	Teacher just looking out the window	1	1

**Component 13. Teacher Time Management**

		Intervention		Comparison	
		Frequency	Percent	Frequency	Percent
1	Little or no evidence of the teacher using time effectively during the lesson.	10	13.5	6	8.7
2	Teacher uses half of the time effectively.	15	20.3	18	26.1
3	Teacher uses three quarters of the time effectively.	24	32.4	20	29.0
4	Teacher uses time very effectively throughout the lesson.	24	32.4	22	31.9
No Response		1	1.4	3	4.3
Total		74	100.0	69	100.0

Codes		Intervention	Comparison
1	Most time spent copying notes from board	1	4
2	Teacher centred	1	4
3	Learners not completely engaged throughout	8	11
4	Started very late	1	2
5	Ineffective management of class	0	2
6	Lesson ran late or teacher didn't finish	2	1
7	Some time spent on content irrelevant to topic	2	0

**Post-Observation Conference. Look at critical incidents in the classroom and ask question about these incidents.** (The following represents a number of the comments teachers voiced in the post-observation debriefing. These conferences were conducted to improve teacher performance and consequently, teacher responses are not a part of the overall assessment.)

**Intervention Group:**

- *2 classes were combined for this lesson. Charts on the wall could have been used.*
- *Algorithmic approaches. Not conceptual. When teacher asked "Any questions?" all chorused "no". She probed and one child did ask question.*
- *Class is not good in English and the teacher is still learning the local language. Realized he should have had more activities and that he repeated himself at times.*
- *Could have integrated HIV/AIDS but did not.*
- *Could have integrated HIV/AIDS into this lesson. Teacher allowed pupils to present topic, she learned this at TTC.*
- *Examples could have been given using materials around the school.*
- *Faster learners should have been used to help the slower. Pupils should have been allowed to ask questions.*
- *Group activities not very effective. Many groups finished very quickly and sat with nothing to do.*
- *Group or pair work should be used to enhance communication. Class is too large for effective teaching, should be split in half to make 2 classes.*
- *Group work would have helped the slow learners. Very quiet moments in the class when pupils were not busy.*

- *Integration of the ZPC methods and methods at the diploma level helped her to deliver the lessons in the fashion she does.*
- *Issue of pupil involvement in class was discussed*
- *Lesson is late according to syllabus. Only 8 textbooks for 2 classes (90 learners)*
- *NBTL groups employed*
- *Need for pupil activities and to ask more challenging questions, to encourage pupils to ask question.*
- *Need learner centered teaching. Need to use available teaching materials. Need to ask challenging questions and to encourage them to ask questions.*
- *Need more pupil activities during lessons.*
- *Need to give challenging work to pupils.*
- *Need to give instructions before an exercise. Need for teacher to go around correcting pupils' work as they write*
- *Need to prepare lesson plans. Encourage group work. Catch up on time with the scheme of work.*
- *No group work when attendance is poor.*
- *No pupils books*
- *No textbooks or pupils guides*
- *No textbooks, only teachers' guide*
- *Not enough science books. A class of 60 learners has only 6 books*
- *Only 10 textbooks for class.*
- *Posters on walls and used as teaching/learning aids*
- *Pupils should be more involved in lesson.*
- *Said he did not require input from pupils because this topic is information giving.*
- *Should have asked the pupils to collect examples of plants around the school.*
- *Social studies lesson is integrated with spiritual and moral education.*
- *Some of the pupils who appeared not to be following the lesson were actually grade 6 pupils who were in this class due to a sick teacher. Teacher used local language with grade 7 pupils.*
- *Taught in grade 7 class in local language, said pupils don't know English. Said he had no time to prepare for the lesson as he teaches 3 classes.*
- *Teacher acknowledges lesson was not very good because she was not prepared.*
- *Teacher acknowledges the lesson should have been a hands-on experimental lesson. However, he did not prepare adequately.*
- *Teacher admits she was not prepared hence there were no pupils activities or any other meaningful TLA.*
- *Teacher competent.*

- *Teacher defended the method she adopted by saying that is how comprehension is taught.*
- *Teacher feels she was not well prepared or trained for this lesson*
- *Teacher feels the lessons were okay, but pupil participation could have been more enhanced.*
- *Teacher felt the lesson was not well presented because more time was spent on preparing grade 9 work. The teacher did not assist pupils while they worked*
- *Teacher had included HIV/AIDS in lesson plan but did not do this.*
- *Teacher had limited knowledge to teach mathematics. Teacher should use brighter students to help those who are slow to learn.*
- *Teacher is 4 weeks behind on the scheme*
- *Teacher learned about grouping pupils for the TTC during training and the NBTl program.*
- *Teacher said she used teacher centered methods in order to finish topic. Gave homework to pupils. "What have you learnt about HIV/AIDS from your parents" Had no relation to what was discussed during the lesson.*
- *Teacher should be preparing and scheming for lessons*
- *Teacher should make groups smaller so everyone participates.*
- *Teacher used small groups but did not equally distribute learning materials*
- *Teacher was not in control of the pupils. Asked questions the answers to which were already on the board.*
- *Teacher well prepared*
- *The teacher emphasized that ZPC syllabus prepared teachers well.*
- *The textbooks are not adequate so the teacher could not use them. Continuity in lessons is a problem due to frequent absenteeism among students.*
- *Used both English and vernacular to explain*
- *Used small groups according to ability and available resources including real objects to explain concepts. Provided extra work for fast learners.*
- *Work given to class not challenging enough.*

**Comparison Group:**

- *Could have integrated HIV/AIDS but did not. No group activities.*
- *Did not see the need for lesson plans as he has been teaching for 30 years.*
- *Dire lack of textbooks.*
- *Drawings were made without any explanation*
- *Group work or pair work should be involved. A lesson should be taught within the time allocated.*
- *Groups too big to ensure participation.*
- *Learners should have been in groups so they could learn from each other. Teacher cites lack of time for failing to group them.*

- *Library set up at back of class for faster students to use if they finish their work early.*
- *Methods were taught to him by colleagues who attended workshops. The methods were taught during TGM--SPRINT.*
- *Need to manage time effectively.*
- *Need to plan for lessons. Need to intensify learner activities. Need to encourage pupils to ask questions.*
- *Need to plan lessons, use a variety of teaching strategies.*
- *Need to prepare lesson plans and schemes of work.*
- *No textbooks available.*
- *Only 5 pupils able to break through the NBTL. Continuity in teaching is difficult since pupils are absent most of the time.*
- *Over enrollment caused crowding in seating arrangement.*
- *Qs by teacher simply to inquire whether they knew the material*
- *Records of work written incorrectly and not checked by HoD or Head teachers*
- *Algorithmic approach. Procedural knowledge emphasized, little understanding of conceptual means of operations.*
- *Slow learners sitting in front so teacher can give them assistance. Small groups used to encourage maximum participation by pupils.*
- *Small class and children have books, pencils, exercise books, sitting in groups. Could have done a lot more to engage learners.*
- *Teacher acknowledges she might have been fast in delivering the lesson and that HIV/AIDS could have been integrated.*
- *Teacher could have collected leaves for use in the lesson.*
- *Teacher could have used materials available in the class and around the school for this lesson.*
- *Teacher engaged pupils in demonstration of solving the problems by working them out on the board. This method was learned from teacher ed. Workshops.*
- *Teacher feels pupils, especially girls, are failing to interact due to cultural barriers. Also, feels some might be uncomfortable with English.*
- *Teacher forgot to use pupils' textbooks.*
- *Teacher had some materials in class that she did not use. Task given to learners was too short because pupils finished quickly and had nothing to do.*
- *Teacher needs training in NBTL as she was only oriented in the method by a teacher who has since left.*
- *Teacher not prepared, answered a question incorrectly.*
- *Teacher realizes that lesson could have been better if insects were used, but failed to prepare properly.*

- *Teacher said he repeated an old lesson because the pupils had not done well on it previously. Used same lesson plan.*
- *Teacher said that group work wastes a lot of time which is needed to cover important points.*
- *Teacher seemed competent.*
- *Teacher unprepared. Used a very loud voice which seemed to intimidate the pupils.*
- *Teacher used a small group of pupils to demonstrate the concept of less and more using fellow pupils. The teacher learned the idea in workshops organized by the SIP.*
- *Teacher used a variety of methods which she learned when she did Primary Schoolteachers Diploma from Chalimbana*
- *Teacher used lecture method mostly because of the nature of the lesson.*
- *Teacher used more individual than group work.*
- *Teacher used small groups for effective delivery of lesson.*
- *Teacher used vernacular when needed.*
- *Teacher used word cards, then tacked them to the wall*
- *Teachers was asked why pupils' sat in groups but worked as individuals. The response was that most pupils do not participate in group work.*
- *Teaching in Chitonga for good participation from pupils*
- *There was positive reinforcement where pupils clapped at a correct response given. Teacher learned the skill from a Read-On Course workshop.*
- *Very little teaching went on.*

**Check store room or other areas with head teacher for available materials for this lesson and the other observations. Comment here about whether or not materials are available but not being used by the teacher.**

Codes		Frequency	Percent	Frequency	Percent
1	Materials for this lesson were in store room or elsewhere in school but not being used	21	28.4	6	8.7
2	There were no other materials in storeroom or school for this lesson	18	24.3	22	31.9
3	Observer did not appear to check storeroom	10	13.5	23	33.3
4	No storeroom at school	0	0.0	2	2.9
5	Materials in Deputy / Head/Senior teachers office	5	6.8	3	4.3
6	Available material well-utilized	12	16.2	11	15.9
7	Only outdated books in storeroom	2	2.7	2	2.9
8	Storeroom locked	2	2.7	0	0.0
No Response		4	5.4	0	0.0
Total		74	100.0	69	100.0

## Appendix D

**CHANGES2 Community Health and Nutrition, Gender and Education Support  
School Environment Checklist Preliminary Results**

	<u>Intervention</u> (total n=24)		<u>Comparison</u> (total n=25)	
	n	%	n	%
<b>PROVINCE</b>				
Central	6	(24.0%)	6	(24.0%)
Copperbelt	6	(24.0%)	6	(24.0%)
Lusaka	6	(24.0%)	6	(24.0%)
Southern	6	(24.0%)	6	(24.0%)
<b>LOCALITY</b>				
Urban	9	(37.5%)	8	(33.3%)
Rural	15	(62.5%)	16	(66.7%)
<b>TYPE</b>				
Middle Basic	6	(25.0%)	7	(29.2%)
Upper Basic	18	(75.0%)	17	(70.8%)
<b>GOV/COMM</b>				
Government	21	(87.5%)	23	(95.8%)
Community	1	( 4.2%)	0	( 0.0%)
Grant-aided	2	( 8.3%)	1	( 4.2%)

	<u>Intervention</u> (n=24)		<u>Comparison</u> (n=24)	
	n	%	n	%
<b>DISTRICT</b>				
Chbombo	1	(4.2%)	1	(4.2%)
Kabwe	1	(4.2%)	1	(4.2%)
Kapiri Mposhi	1	(4.2%)	1	(4.2%)
Mkushi	1	(4.2%)	1	(4.2%)
Mumbwa	1	(4.2%)	1	(4.2%)
Serenje	1	(4.2%)	1	(4.2%)
Chlalabombwe	1	(4.2%)	0	(0.0%)
Chingola	1	(4.2%)	1	(4.2%)
Luanshya	1	(4.2%)	1	(4.2%)
Masaiti	1	(4.2%)	1	(4.2%)
Mpongwe	1	(4.2%)	1	(4.2%)
Mufulira	0	(0.0%)	1	(4.2%)
Ndola	1	(4.2%)	1	(4.2%)
Chongwe	1	(4.2%)	2	(8.3%)
Lusaka	2	(8.3%)	2	(8.3%)
Luangwa	2	(8.3%)	0	(0.0%)
Kafue	1	(4.2%)	2	(8.3%)
Choma	1	(4.2%)	1	(4.2%)
Kalomo	1	(4.2%)	1	(4.2%)
Kazungula	2	(8.3%)	1	(4.2%)
Livingstone	1	(4.2%)	2	(8.3%)
Mazabuka	1	(4.2%)	1	(4.2%)



**Mean, Standard Error, and Standard Deviation for each item:**

No.	OBSERVATION	Possible Max pts	Intervention			Comparison		
			Mean	Standard Error	Standard Deviation	Mean	Standard Error	Standard Deviation
1	School Community Partnership (SCP) Committee which promotes School Health and Nutrition	2	<b>1.00</b>	0.17	0.83	<b>0.67</b>	0.17	0.82
2.	Has the SCP Committee got an action plan on (i) SHN (ii) HIV/AIDS	2	<b>0.83</b>	0.16	0.76	<b>0.46</b>	0.16	0.78
3.	Are the action plans being followed?	2	<b>0.83</b>	0.18	0.87	<b>0.63</b>	0.18	0.88
4.	Is the SCP Committee active?	1	<b>0.42</b>	0.10	0.50	<b>0.13</b>	0.07	0.34
5.	Is there a school policy on (i) SHN (ii) HIV/AIDS (iii) Home Work	6	<b>0.96</b>	0.32	1.55	<b>0.38</b>	0.13	0.65
6.	Are pupils and teachers aware of the school health policy?	3	<b>0.46</b>	0.13	0.66	<b>0.58</b>	0.17	0.83
7.	Is there a school garden, field for food crops or orchard?	5	<b>1.79</b>	0.16	0.78	<b>2.04</b>	0.30	1.49
8.	Are pupils fed on produce from the garden or orchard?	2	<b>0.75</b>	0.15	0.74	<b>0.67</b>	0.17	0.82
9.	Are there pit latrines /toilets for teachers and pupils	2	<b>1.54</b>	0.16	0.78	<b>1.75</b>	0.12	0.61
10.	Are the toilets adequate?	3	<b>1.33</b>	0.29	1.40	<b>1.13</b>	0.25	1.23
11.	Maintenance of latrines	2	<b>1.17</b>	0.18	0.87	<b>1.29</b>	0.16	0.81
12.	Is there a provision for washing hands by use of running water after use of toilet?	3	<b>1.79</b>	0.27	1.32	<b>1.92</b>	0.27	1.32
13.	Is the school surrounding well-kept and free from animal droppings and litter?	2	<b>1.67</b>	0.10	0.48	<b>1.63</b>	0.12	0.58
14.	Are pupils and teachers drinking water from a safe source?	2	<b>1.04</b>	0.09	0.46	<b>1.17</b>	0.12	0.56
15.	Is the water treated?	1	<b>0.42</b>	0.12	0.58	<b>0.29</b>	0.09	0.46
16.	Is the water source protected from animals and dirt?	2	<b>1.54</b>	0.15	0.72	<b>1.63</b>	0.13	0.65
17.	Do pupils know where they can go to get materials on health and nutrition?	2	<b>0.21</b>	0.10	0.51	<b>0.33</b>	0.14	0.70
18.	Is there a SHN Resource Corner?	1	<b>0.29</b>	0.09	0.46	<b>0.04</b>	0.04	0.20
19.	Is the SHN resource corner utilized?	2	<b>0.25</b>	0.11	0.53	<b>0.00</b>	0.00	0.00
20.	Are there active health promoting clubs at your school?	3	<b>1.33</b>	0.22	1.09	<b>1.25</b>	0.21	1.03
21.	Is there a Community Based Organization in the surrounding community supporting the SHN program	2	<b>0.54</b>	0.17	0.83	<b>0.21</b>	0.12	0.59
Total		50	<b>20.17</b>	1.50	7.35	<b>18.17</b>	1.38	6.74

### **Frequency Tables for Each Item**

#### **1. Does the school have a School Community Partnership (SCP) Committee which promotes school Health and Nutrition? (2 points)**

	Intervention		Comparison	
Score	Frequency	Percent	Frequency	Percent
0	8	33.3	13	54.2
1	8	33.3	6	25.0
2	8	33.3	5	20.8
Total	24	100.0	24	

#### **2. Does the SCP Committee have an action plan on (i) SHN (ii) HIV/AIDS? (2 points)**

	Intervention		Comparison	
Score	Frequency	Percent	Frequency	Percent
0	9	37.5	17	70.8
1	10	41.7	3	12.5
2	5	20.8	4	16.7
Total	24	100.0	24	100.0

#### **3. Are the action plans being followed? (2 points)**

	Intervention		Comparison	
Score	Frequency	Percent	Frequency	Percent
0	11	45.8	15	62.5
1	6	25.0	3	12.5
2	7	29.2	6	25.0
Total	24	100.0	24	100.0

**4. Is the SCP committee active? (1 points)**

	Intervention		Comparison	
Score	Frequency	Percent	Frequency	Percent
0	14	58.3	21	87.5
1	10	41.7	3	12.5
Total	24	100.0	24	100.0

**5. Is there a school policy on (i) SHN (ii) HIV/AIDS (iii) Home Work? (6 points)**

	Intervention		Comparison	
Score	Frequency	Percent	Frequency	Percent
0	14	58.3	17	70.8
1	4	16.7	5	20.8
2	3	12.5	2	8.3
3	1	4.2	0	0
4	1	4.2	0	0
5	0	0	0	0
6	1	4.2	0	0
Total	24	100.0	24	100.0

**Comments:**

	Intervention	Comparison
	Frequency	Frequency
HIV/AIDS	4	4
Homework	1	0

**6. Are pupils and teachers aware of school health policy? (3 points)**

	Intervention		Comparison	
Score	Frequency	Percent	Frequency	Percent
0	15	62.5	15	62.5
1	7	29.2	4	16.7
2	2	8.3	5	20.8
Total	24	100.0	24	100.0

**7. Is there a school garden, field for food crops or orchard? (5 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	1	4.2	5	20.8
1	7	29.2	4	16.7
2	12	50.0	5	20.8
3	4	16.7	6	25.0
4	0	0	3	12.5
5	0	0	1	4.2
Total	24	100.0	24	100.0

**Comments:**

	Intervention	Comparison
	Frequency	Frequency
Maize and beans only	0	1
Maize and okra only	1	0
Fruit trees	2	3
Maize only	5	1
Problems with vandalism	0	1
School has animals	1	0

**8. Are pupils fed on product from the garden or orchard? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	10	41.7	13	54.2
1	10	41.7	6	25.0
2	4	16.7	5	20.8
Total	24	100.0	24	100.0

**Comments:**

	Intervention	Comparison
	Frequency	Frequency
Only those involved in sports	3	4
Given only on sports day	4	2
Pupils carry food from garden home	0	1

**9. Are there pit latrines/toilets for teachers and pupils? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	4	16.7	2	8.3
1	3	12.5	2	8.3
2	17	70.8	20	83.3
Total	24	100.0	24	100.0

**10. Are the toilets adequate? (3 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	11	45.8	10	41.7
1	3	12.5	7	29.2
2	1	4.2	1	4.2
3	9	37.5	6	25.0
Total	24	100.0	24	100.0

**11. Are the latrines well-maintained? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	7	29.2	5	20.8
1	6	25.0	7	29.2
2	11	45.8	12	50.0
Total	24	100.0	24	100.0

**12. Is there a provision for washing hands by use of running water after use of toilet? (3 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	7	29.2	6	25.0
1	2	8.3	3	12.5
2	4	16.7	2	8.3
3	11	45.8	13	54.2
Total	24	100.0	24	100.0

**13. Is the school surroundings well-kept and free from animal droppings and litter? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	0	0	1	4.2
1	8	33.3	7	29.2
2	16	66.7	16	66.7
Total	24	100.0	24	100.0

**14. Are pupils and teachers drinking water from safe source? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	2	8.3	2	8.3
1	19	79.2	16	66.7
2	3	12.5	6	25.0
Total	24	100.0	24	100.0

**15. Is the water treated? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	15	62.5	17	70.8
1	8	33.3	7	29.2
2	1	4.2	0	0
Total	24	100.0	24	100.0

**16. Is the water source protected from animals and dirt? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	3	12.5	2	8.3
1	5	20.8	5	20.8
2	16	66.7	17	70.8
Total	24	100.0	24	100.0

**17. Do pupils know where they can go to get materials on health and nutrition? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	20	83.3	19	79.2
1	3	12.5	2	8.3
2	1	4.2	3	12.5
Total	24	100.0	24	100.0

**18. Is there a SHN Source Corner? (1 point)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	17	70.8	23	95.8
1	7	29.2	1	4.2
Total	24	100.0	24	100.0

**19. Is the SHN resource corner utilized? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	19	79.2	24	100.0
1	4	16.7	0	0
2	1	4.2	0	0
Total	24	100.0	24	100.0

**20. Are there active health promoting clubs? (3 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	7	29.2	7	29.2
1	6	25.0	7	29.2
2	7	29.2	7	29.2
3	4	16.7	3	12.5
Total	24	100.0	24	100.0

**Comments:**

	Intervention	Comparison
	Frequency	Frequency
Childe child	2	2
FAWEZA/SAFE	4	3
Anti-AIDS	3	10
Red cross	3	1
Popular drama	0	3
SHN	1	0
CRAIDS	1	0

**21. Is there a Community Based Organization in the surrounding community supporting the SHN program? (2 points)**

Score	Intervention		Comparison	
	Frequency	Percent	Frequency	Percent
0	16	66.7	21	87.5
1	3	12.5	1	4.2
2	5	20.8	2	8.3
Total	24	100.0	24	100.0

**Comments:**

	Intervention	Comparison
	Frequency	Frequency
DAPP	0	1
Local CBO	1	0
Local CBO doing HBC	1	0
YWCA	1	0





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