



## SCHOOL DROPOUT PREVENTION PILOT PROGRAM

# Do Early Warning Systems and Student Engagement Activities Reduce Dropout?

## Findings from the School Dropout Prevention Pilot Program Impact Evaluation in Timor-Leste

### Volume 2: Technical Appendices



**Contract No. EDH-I-00-05-00029-00**  
**Task Order AID-OAA-TO-10-00010**

September 2015

This document was produced for review by the United States Agency for International Development. It was prepared by Creative Associates International.



# **Do Early Warning Systems and Student Engagement Activities Reduce Dropout?**

**Findings from the SDPP Evaluation in Timor-Leste**

## **Volume 2: Technical Appendices**

**Submitted to:**

**United States Agency for International Development  
Washington, DC**

**Submitted by:**

**Creative Associates International, Inc.  
Washington, DC**

**September 2015**

This report was made possible by the American people through the United States Agency for International Development (USAID). The contents of this report are the sole responsibility of Creative Associates International and do not necessarily reflect the views of USAID or the United States Government.

## DEC Submission Requirements

|    |  |  |
|----|--|--|
| a. | USAID Award Number                       | Contract No. EDH-I-00-05-00029-00<br>Task Order AID-OAA-TO-10-00010  |
| b. | USAID Objective Title and Number         | Investing in People (IIP)  |
| c. | USAID Project Title and Number           | USAID Asia and Middle East Regional School Dropout Prevention Pilot (SDPP) Program   |
| d. | USAID Program Area and Program Element   | Education (program area 3.2)<br>Basic Education (program element 3.2.1)  |
| e. | Descriptive Title                        | Findings from the School Dropout Prevention Pilot Program Impact Evaluation in Timor-Leste, Volume 2: Technical Appendices   |
| f. | Author Name(s)                           | Creative Associates International and Mathematica Policy Research  |
| g. | Contractor name                          | Creative Associates International, Inc.<br>5301 Wisconsin Avenue, NW, Suite 700<br>Washington, DC 20015<br>Telephone: 202 966 5804 Fax: 202 363 4771<br>Contact: KarenT@creativedc.com |
| h. | Sponsoring USAID Operating Unit and COTR | Asia/TS<br>Eric Bergthold, COTR  |
| i. | Date of Publication                      | September 2015   |
| j. | Language of Document                     | English, Portuguese, Tetun   |

## TABLE OF CONTENTS

---

|  |    |
|--|----|
| APPENDIX A. EVALUATION DESIGN .....  | 1  |
| A. Details of the evaluation design .....  | 1  |
| B. Data Collection .....   | 4  |
| C. Selection of analysis sample .....  | 10 |
| D. Assessing risk of attrition bias .....  | 10 |
| APPENDIX B. ANALYTIC METHODS .....   | 12 |
| A. Estimation strategy.....  | 12 |
| B. Treatment of missing data.....  | 15 |
| C. Approach to multiple comparisons .....  | 15 |
| D. Sensitivity tests .....   | 17 |
| APPENDIX C. ANALYZING TEACHER AND SCHOOL ADMINISTRATOR<br>OUTCOMES.....  | 19 |
| A. Teacher turnover .....  | 19 |
| B. Details on primary and secondary teacher outcomes.....  | 20 |
| C. School administrator outcomes.....  | 24 |
| APPENDIX D. ANALYZING AT-RISK STUDENT ATTITUDES .....  | 27 |
| APPENDIX E. ANALYZING SCHOOL ENGAGEMENT .....  | 30 |
| APPENDIX F. ANALYZING SCHOOL DROPOUT .....   | 32 |
| APPENDIX G. EXPOSURE ANALYSIS .....  | 36 |
| A. Attendance and exposure .....   | 36 |
| B. Dropout and exposure.....   | 37 |
| APPENDIX H. SUPPLEMENTAL TABLES.....   | 39 |
| APPENDIX I. SCHOOL-LEVEL TREND ANALYSIS .....  | 51 |
| A. School-level enrollment and headcount data .....  | 51 |
| B. School dropout rates .....  | 51 |
| C. School enrollment.....  | 53 |
| D. School attendance .....   | 55 |
| APPENDIX J. PROPENSITY SCORE ANALYSIS OF SCHOOLS WITH HIGH<br>FIDELITY OF IMPLEMENTATION AND STUDENTS IDENTIFIED BY THE<br>EWS ..... | 59 |
| A. Estimating Propensity Scores .....  | 62 |
| B. Selecting an Appropriate Comparison Group.....  | 64 |
| C. Estimating TOT Impacts.....   | 67 |
| APPENDIX K. INSTRUMENTS.....   | 73 |

## TABLES

---

|   |      |
|---|------|
| Table A.1. Data Collection Sample Sizes.....  | A.6  |
| Table A.2. Teacher questionnaire response rates, by research group.....   | A.7  |
| Table A.3. At-risk student questionnaire response rates, by research group.....   | A.8  |
| Table A.4. Average at-risk student characteristics prior to intervention, by response to questionnaire (SY 2012 and SY 2013) (percentage unless otherwise indicated).....                                   | A.9  |
| Table B.1. Control variables used in regression models to estimate SDPP’s impacts.....  | A.13 |
| Table B.2. Conventions for describing statistical significance of SDPP impact estimates.....  | A.14 |
| Table B.3. Primary outcomes in key domains.....   | A.16 |
| Table B.4. Statistical significance of at-risk student attitudes outcomes using standard p-value thresholds and thresholds adjusted for multiple comparisons.....   | A.16 |
| Table B.5. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline, by estimation method (SY 2013 and SY 2014).....   | A.17 |
| Table C.1. Likelihood of base cohort of grade 4, 5, and 6 homeroom teachers to continue teaching in target grade the following year (SY 2013 and SY 2014) (percentage).....                                 | A.20 |
| Table C.2. Impact of the SDPP Program at endline on alternative construction of teacher dropout prevention practice scale (SY 2013 and SY 2014).....  | A.21 |
| Table C.3. Impacts of the SDPP Program at endline on additional teacher outcomes (SY 2013 and SY 2014).....   | A.23 |
| Table C.4. Impacts of the SDPP Program at endline on school administrator outcomes (SY 2013 and SY 2014).....   | A.25 |
| Table E.1. Impacts of the SDPP Program on alternative attendance measures at endline (SY 2013 and SY 2014).....   | A.31 |
| Table F.1. Impact of the SDPP Program at endline on alternative measures of global dropout (SY 2013 and SY 2014).....   | A.33 |
| Table F.2. Impact of the SDPP Program at endline on alternative measures of dropout (SY 2013 and SY 2014).....  | A.34 |
| Table F.3. Impact of the SDPP Program at endline on progression in school (SY 2013 and SY 2014) (percentage).....   | A.35 |
| Table H.1. Average school characteristics prior to intervention (SY 2012) (percentage of schools unless otherwise indicated).....   | A.39 |
| Table H.2. At-risk student demographic characteristics prior to intervention, by inclusion in at-risk student questionnaire (Grades 3-5, SY 2012) (percentages of students unless otherwise indicated)..... | A.40 |
| Table H.3. Average teacher characteristics for math, language, and homeroom teachers prior to intervention (Grades 4, 5, and 6, SY 2012) (percentage of teachers unless indicated otherwise).....           | A.41 |

|  |      |
|--|------|
| Table H.4. Average school administrator characteristics for math, language, and homeroom teachers prior to intervention (SY 2012) (percentage of teachers unless indicated otherwise).....   | A.42 |
| Table H.5. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline (SY 2013 and SY 2014).....  | A.43 |
| Table H.6. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline, by at-risk status (SY 2012, SY 2013, and SY 2014) .....  | A.44 |
| Table H.7. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline, by cohort (SY 2013 and SY 2014).....   | A.45 |
| Table H.8. SDPP’s impacts on the primary measure of program effectiveness for teacher outcomes, by subgroup (SY 2013 and SY 2014).....   | A.46 |
| Table H.9. SDPP’s impact on additional attitudinal outcomes of at-risk students (SY 2013 and SY 2014) .....  | A.46 |
| Table H.10. SDPP’s impacts on the primary at-risk student attitude measures, by subgroup (SY 2013 and SY 2014) .....   | A.47 |
| Table H.11. SDPP’s impacts on additional engagement outcomes (SY 2013 and SY 2014).....  | A.48 |
| Table H.12. SDPP’s impacts on the primary student engagement outcome (attendance) for students, by subgroup (SY 2013 and SY 2014) .....  | A.49 |
| Table H.13. SDPP’s impacts on school dropout, by subgroup (SY 2013 and SY 2014) .....  | A.50 |
| Table J.1. Pre-program exposure characteristics for schools with high FOI compared with characteristics of all control schools (grades 4-6, SY 2012) (percentage unless indicated otherwise).....                                  | A.60 |
| Table J.2. Pre-program exposure characteristics for students identified through the EWS compared with characteristics of all control group students (SY 2012, SY 2013, SY 2014).....   | A.61 |
| Table J.3. Selecting an appropriate comparison group under traditional matching and “likely to be high FOI” or “likely to be identified” matching approaches .....   | A.65 |
| Table J.4. Actual High FOI schools in SDPP group, by “likely to be high FOI” status (SY 2012, SY 2013, SY 2014) (percentages of students unless otherwise indicated).....  | A.67 |
| Table J.5. Actual EWS identification status of SDPP group students, by “likely to be identified” status (SY 2012, SY 2013, SY 2014) (percentages).....   | A.67 |
| Table J.6. Pre-program exposure characteristics of SDPP and control group students included in the FOI propensity score analysis (SY 2012, SY 2013, SY 2014) (percentages of students unless otherwise indicated) .....            | A.68 |
| Table J.7. Pre-program exposure characteristics of SDPP and control group students included in the EWS identification propensity score analysis (SY 2012, SY 2013, SY 2014).....   | A.69 |
| Table J.8. SDPP’s quasi-experimental impacts on the primary measures of program effectiveness at endline for students in schools with high fidelity of implementation, by method of matching (SY 2012, SY 2013, and SY 2014) ..... | A.70 |

|  |      |
|--|------|
| Table J.9. SDPP’s quasi-experimental impacts on the primary measures of program effectiveness at endline for students identified through the EWS, by method of matching (SY 2012, SY 2013, and SY 2014)..... | A.71 |
|--|------|

## FIGURES

---

|   |      |
|---|------|
| Figure G.1. SDPP’s impact on daily attendance with changing levels of exposure to the intervention .....    | A.36 |
| Figure G.2. SDPP’s impact on dropout rates with changing levels of exposure to the intervention .....       | A.37 |
| Figure I.1. School within-grade dropout rates, by grade and school year (excluding transfer students).....  | A.52 |
| Figure I.2. School between-grade dropout rates, by grade and school year (excluding transfer students)..... | A.53 |
| Figure I.3. School enrollment rates, by grade and school year .....   | A.54 |
| Figure I.4. Grade 4–6 headcount, by school year .....   | A.56 |
| Figure I.5. School attendance rates, by grade and school year .....   | A.58 |

## APPENDIX A. EVALUATION DESIGN

### A. Details of the evaluation design

The SDPP team used a random assignment research design to provide rigorous evidence on the impact of the SDPP Program. As described in Section III of *Volume 1: Main Findings*, the SDPP team randomly assigned schools to either an SDPP group that received the SDPP Program, or a control group that operated as usual. SDPP estimated program impacts by comparing relevant outcomes for students and teachers in schools randomly assigned to the SDPP group to the outcomes of students and teachers in schools randomly assigned to the control group. With well-implemented random assignment, the students and teachers in treatment schools are similar to those in control schools in terms of their pre-existing characteristics.<sup>1</sup> The only systematic difference between these groups is that the students and teachers in the treatment group had access to the SDPP Program, and the students and teachers in the control group did not. The result is that any observed treatment-control differences in outcomes can be attributed to the SDPP Program and not to pre-existing differences in the characteristics of students, teachers, and schools in the sample.

**Study eligibility.** Because the program was designed to operate at the school level, for the purpose of the intervention and evaluation, the SDPP team used a multistep process following several eligibility criteria to develop a list of eligible schools. First, the team conducted a detailed analysis of available data on dropout trends to identify the schooling cycle and geographic regions most affected by dropout (Shin, Jennifer, Rajani Shrestha, and Karen Tietjen 2011b). The grades with the highest dropout rate—4th, 5th, and 6th grade—and region with the highest 4th-, 5th-, and 6th-grade dropout rate were selected to be targeted by the SDPP Program.<sup>2</sup> The SDPP team then gave a composite ranking to districts based on four indicators (dropout rate, promotion rate, survival rate, and transition rate). The districts of Ermera, Liquica, and Bobonaro were chosen based on their rankings for the four indicators and practical considerations. Next, based on the dropout information available, SDPP performed power calculations to determine the optimal study sample size to reach an attainable and reasonable minimum detectable impact (MDI)—the smallest impact that can be statistically distinguished from zero, given the expected dropout levels (Murray, Nancy, Quinn Moore, Larissa Campuzano, Kathy Buek, Emilie Bagby, and Mark Strayer 2012).<sup>3</sup> Third, bearing in mind logistical considerations, sample size requirements, and other aspects of program rollout, the team made final selections of eligible districts and localities in discussions with the

---

<sup>1</sup> Appendix H provides a full set of tables with characteristics of the SDPP and control groups before the intervention.

<sup>2</sup> In Timor-Leste, dropout rates, as determined from the Education Management Information System, show that dropout is most acute for the three last primary grades (grades 4–6) among male and female students. The average dropout rate in the primary cycle in 2008–2009 was about 6 percent, compared with an average dropout rate of about 2 percent in the secondary cycle. Comparing across grades, dropout is high in grades 4 and 5. Dropout in grade 6 is artificially low because EMIS does not consider students who leave school after the end of a cycle as dropout. The dropout rate is about 7 percent in both 4th and 5th grade. Sixth grade was also included because it was hypothesized that this last grade in the primary cycle would have a high dropout rate if EMIS considered students who leave school after the end of a cycle as dropouts.

<sup>3</sup> For any study, there is a trade-off between power (obtaining a smaller MDI) to facilitate detecting an impact and feasibility on the ground for implementation purposes.

Ministry of Education staff.<sup>4</sup> Schools within the localities were eligible if they (1) were located in the five target districts, (2) offered 4th, 5th, and 6th grade, (3) were not a technical or religious school, (4) were not receiving major assistance from other donors or organizations, such as UNICEF, Childfund, and CARE, and (5) agreed to participate in the evaluation. This process led to the identification of 213 eligible schools. The final list consisted of 194 schools (Tietjen, Karen 2012).<sup>5</sup> With an estimated sample size of 206 schools (SDPP conducted the power calculations when the number of eligible schools was not yet final) and a 7.5 percent dropout rate anticipated at the time of study design, power calculations indicated that the study would be able to detect an impact of 4 percentage points or higher using a two-tailed t-test (Murray, Nancy, Quinn Moore, Larissa Campuzano, Kathy Buek, Emilie Bagby, and Mark Strayer 2012).<sup>6</sup>

**Random assignment process.** SDPP conducted random assignment at the school level among the eligible schools within each district. Randomization was stratified by district, which helped to ensure that the SDPP and control groups were balanced across areas. Also, SDPP randomly assigned an even number of eligible schools within each district, so each school had a one-half probability of being assigned to either group. SDPP conducted the random assignment. The final sample includes 97 schools assigned to the SDPP group and 94 assigned to the control group, for a total of 191 schools.<sup>7, 8</sup>

**Unit of analysis.** Although the unit of random assignment was the school, the unit of analysis was individual students and teachers from all SDPP and control schools that were part of the random assignment process. Because grades 4–5 were the target grades for the SDPP Program, we use data from all 4th-, 5th-, and 6th-grade students and teachers from the study schools in the impact analysis, from both SDPP and control groups.

**Identification of at-risk students.** The SDPP Program was designed specifically to target those students most at risk of dropout. To identify at-risk students in the SDPP schools for the EWS component of the program, 4th-, 5th-, and 6th-grade homeroom teachers used school-level data about the students and their knowledge of the students to assign at-risk scores to each. The data elements included a measure of recent attendance, scores in recent math and Tetun exams, the homeroom teacher’s assessment of the student’s behavior, a measure of how often the student is

---

<sup>4</sup> Along with Ermera, Liquica, and Bobonaro, the districts of Manatuto and Ainaro were added. During the recruitment process, the project was informed by Save the Children that they had already started scaling up the Child Friendly Schools model in Ainaro district. Since that scale up will cover all of SDPP’s target schools in the district, a decision was made to replace Ainaro schools with a set of schools located in the district of Viqueque (Tietjen 2012).

<sup>5</sup> Fourteen were removed from the list due to problems of access, and three additional schools were removed because another project was implementing health and hygiene activities in those schools. One school in Ermera was taken off the list due to the existence of a community-based dropout prevention taskforce, and one in Viqueque was eliminated when the school leadership did not consent to the Memorandum of Agreement (Tietjen, Karen 2012).

<sup>6</sup> The observed dropout rate in the first year of the program was 7.4 percent. Thus, the minimum detectable impact at the time of the impact analysis was the same as was anticipated.

<sup>7</sup> One SDPP school and three control schools dropped out of the study because they no longer offered 6th grade, a condition for participation in the evaluation.

<sup>8</sup> Of the 94 schools randomly assigned to the control group, one school dropped out of the study sample during the SY 2013, leaving a final sample size of 97 SDPP schools and 93 control schools.

tardy or leaves school early, and a measure of how often the student completes his or her homework (Creative Associates International 2012d). The SDPP team mapped each of the six data elements into a three-point scale, going from 0 for low risk of dropout to 2 for high risk.<sup>9</sup> Teachers then summed these six scores to create an at-risk index score ranging from 0 to 12. The SDPP team then identified students as at risk of school dropout through three possibly overlapping routes: (1) the student received a score of 2 on the attendance data element; (2) the student's at-risk index score was greater than or equal to 8; or (3) the student's at-risk index score was in the upper 15th percentile of the score distribution for the his/her class, with the 15th percentile equal to twice the dropout rate found in 4th, 5th, and 6th grade in the regions identified in the dropout rate analyses (Creative Associates International 2012c).

For purposes of the evaluation, however, the SDPP team needed to identify students at risk of dropping out in both the SDPP and the control schools. To ensure that identification of this subgroup of students is the same across the two research groups, we identified at-risk students using a process that mimics the EWS process described above, but relies on analogue information for the data elements available from the pre-intervention period. We had pre-intervention information for four of the six at-risk variables used in Timor-Leste's EWS at-risk designation process: attendance, math exam scores, Tetun exam scores, and behavior grades. We did not have pre-intervention data that corresponded to how often the student is tardy or leaves school early or how often the student completes his or her homework. The SDPP team mapped the four available data elements into a three-point scale for each student, as was done for the EWS at-risk designation process. We then summed the four scores to create at-risk index scores for each student.

Finally, to identify at-risk students for the evaluation, SDPP used similar rules as for the EWS at-risk designation process in schools. Specifically, SDPP identified students as at risk under the following conditions: (1) the student received a score of 2 on the attendance data element; (2) the student's at-risk index score was at least 5 (this threshold is lower than the one used by the EWS to account for this process using only four at-risk indicators rather than the six indicators the EWS uses); and (3) the student had an at-risk index score at or above the upper 15th percentile of the distribution for his/her class.

---

<sup>9</sup> The most recent month of attendance data mapped into the risk categories as follows: 0 for no absences, 1 if the student missed 1 or 2 days of class, and 2 if the student missed 3 or more days of class. The teacher's assessment of the how often the student is tardy or leave school early: 0 if the student was always on time, 1 if the student arrived late or left early once in the past week, and 2 if the student arrived late or left early twice or more in the past week. The student's most recent trimester of math and Tetun scores mapped into the risk categories as follows: 0 if the student received a score of 7 or higher (the range is 1 to 10), 1 if the student received a score of 6 or 7, and 2 if the student received a score lower than 6. The teacher's assessment of the student's behavior mapped into the risk categories as follows: 0 if the student had no problems, 1 if the student showed a lack of attention, and 2 if the student exhibited disruptive behavior. The teacher's assessment of how often the student completes his/her homework mapped into the risk categories as follows: 0 if the student always turned in his/her homework, 1 if the student failed to turn in homework once in the last three weeks, and 2 if the student failed to turn in homework twice or more in the last three weeks (Creative Associates International 2012d).

## **B. Data Collection**

### **1. Data collection timeline and sample sizes**

The impact evaluation uses data from all SDPP and control schools collected at five time points (Figure II.C.1 of the main report) spanning the three school years during which the intervention was active. We collected data from the SY 2012 6th grade cohort during baseline, from the SY 2012 4th- and 5th- grade cohorts during baseline, follow-up 1 and follow-up 2, from the SY 2013 4th-grade cohort during all rounds of data collection, and from the SY 2014 4th- grade cohort during follow-up 2, follow-up 3, and follow-up 4. The types of data collected at each time point varied due to data availability, school schedules, and the study timeline.

Baseline data collection took place in the middle of SY 2012, prior to the start of the SDPP intervention. Implementation began in July of SY 2012. We collected names and pre-intervention characteristics—SY 2012 start of year attendance and performance—for SY 2012 3rd- through 6th- graders. We also conducted baseline teacher interviews with SY 2012 4th- through 6th- grade math, language, and homeroom teachers and school directors.

The follow-up 1 data collection took place at the start of SY 2013, after one partial year of program implementation. Due to logistical constraints, we did not add any new students to the sample at this point. As part of follow-up 1, we collected SY 2012 2nd- and 3rd- trimester attendance and performance data for baseline students already in the sample, and we collected a final measure of dropout for the SY 2012 6th-grade students who had progressed beyond the grades targeted by SDPP.<sup>10</sup> We conducted student interviews for a subsample of the SY 2012 4th- and 5th- grade students and SY 2013 4th-grade students, and we conducted interviews with SY 2012 4th- through 6th-grade, and SY 2013 4th- grade teachers and administrators.

The follow-up 2 data collection took place at the start of SY 2014, after one full year and one partial year of program implementation. We added four groups of students to the sample at this time: (1) any students who transferred into the SY 2012 4th- grade cohort since baseline, 2) any students who transferred into the SY 2012 5th- grade cohort since baseline, 3) any students who transferred into the SY 2013 4th- grade cohort since baseline, and 4) all students in SY 2014 4th-grade. We collected SY 2013 attendance and performance data for all students, and we collected names and pre-intervention characteristics for the SY 2014 4th-grade student cohort added to the sample at follow-up 2. We also collected a final measure of dropout for the SY 2012 5th-grade students who, assuming normal grade progression, last received exposure to the SDPP intervention at the end of SY 2013.

The follow-up 3 data collection took place at the end of the SY 2014, the final year of program implementation. At this point we collected information for the 1st- and 2nd- trimesters of SY 2014 for all students still receiving SDPP treatment: the SY 2012, SY 2013, and SY 2014 4th-grade cohorts. In addition to these students already in the sample, we added any students who transferred into these grades since we last visited schools at follow-up 2, the start of the SY 2014. We

---

<sup>10</sup> We do not include the SY 2012 6th grade student cohort in the analysis because they were not exposed to at least one full year of SDPP.

conducted student interviews with sampled SY 2012, SY 2013, and SY 2014 4th-grade cohort students, and teacher interviews with SY 2014 4th- through 6th-grade teachers and administrators.

The follow-up 4 data collection took place at the start of SY 2015, after the intervention had ended. At this point, we collected attendance and performance information for the end of the SY 2014, as well as enrollment information to construct a final measure of dropout for the SY 2012, SY 2013, and SY 2014 4th-grade cohorts.<sup>11</sup> We also conducted school administrator interviews at this time to gather school characteristics for SY 2015.

Overall, SDPP collected data from 191 schools, 97 treatment and 94 control, at each data collection point (Table A.1).<sup>12</sup> Across all phases of data collection, we collected school records for 6,005 students from the SY 2012 6th grade cohort, 7,064 students from the SY 2012 5th grade cohort, 8,799 students from the SY 2012 4th grade cohort, 9,931 students from the SY 2013 4th grade cohort, and 6,044 students from the SY 2014 4th grade cohort. Student interviews were administered to 1,760 students from the SY 2012 5th grade cohort, 1,848 students from the SY 2012 4th grade cohort, 1,991 students from the SY 2013 4th grade cohort, and 1,774 students from the SY 2014 4th grade cohort. We also collected teacher records for 2,389 4th through 6th-grade teachers and administrators across rounds, and conducted teacher interviews for 1,031 SY 2012 teachers and administrators, 903 SY 2013 teachers and administrators, and 945 SY 2014 teachers and administrators.<sup>13</sup>

---

<sup>11</sup> Dropout is a global dropout rate that includes between-grade dropout rate measured at the beginning of SY 2015 for the SY 2013 and SY 2014 4th-grade student cohorts; and within-grade dropout at the end of SY 2013 for the SY 2012 5th-grade student cohort and SY 2014 for the SY 2012 4th-grade student cohort.

<sup>12</sup> During SY 2013, 1 control school closed. The numbers reported include all schools present at baseline.

<sup>13</sup> These numbers include any student or teacher for whom we collected data from school records or through interviews. We used a subset of these student and teacher records in the analyses.

*Table A.1. Data Collection Sample Sizes*

| <b>Data collected for:</b>          | <b>Baseline</b> | <b>Follow-up 1</b> | <b>Follow-up 2</b> | <b>Follow-up 3</b> | <b>Follow-up 4</b> | <b>Total Unique Records<sup>b</sup></b> |
|-------------------------------------|-----------------|--------------------|--------------------|--------------------|--------------------|---|
| Schools                             | 191             | 191                | 190                | 190                | 190                | 191                                     |
| Student Records 2012 Grade 6        | 6,005           | 6,005              | 310 <sup>a</sup>   | 14                 | 4                  | 6,005                                   |
| Student Records 2012 Grade 5        | 7,001           | 6,997              | 7,064              | 822                | 590                | 7,064                                   |
| Student Records 2012 Grade 4        | 7,827           | 7,819              | 8,549              | 8,799              | 8,799              | 8,799                                   |
| Student Records 2013 Grade 4        | 8,644           | 8,637              | 9,481              | 9,931              | 9,931              | 9,931                                   |
| Student Records 2014 Grade 4        | n.a.            | n.a.               | 5,897              | 6,044              | 6,044              | 6,044                                   |
| Student Questionnaires 2012 Grade 5 | n.a.            | 1,760              | n.a.               | 2                  | n.a.               | 1,760                                   |
| Student Questionnaires 2012 Grade 4 | n.a.            | 1,848              | n.a.               | 1,838              | n.a.               | 1,848                                   |
| Student Questionnaires 2013 Grade 4 | n.a.            | 1,960              | n.a.               | 1,991              | n.a.               | 1,991                                   |
| Student Questionnaires 2014 Grade 4 | n.a.            | n.a.               | n.a.               | 1,774              | n.a.               | 1,774                                   |
| Teacher Records                     | 1,881           | 2,044              | n.a.               | 2,389              | n.a.               | 2,389                                   |
| Teacher Questionnaires              | 1,031           | 903                | n.a.               | 945                | n.a.               | 1,444                                   |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up student surveys, May 2013 and September 2014; baseline and follow-up teacher self-administered questionnaires, May 2012, May 2013, and September 2014.

Note: Sample sizes refer to the number of total data points from each data collection source ever collected. A subset of these records is used in the impact analysis.

<sup>a</sup> Small sample sizes for student records and interview samples due to grade repetition or demotion for students in cohorts that would have normally progressed beyond grade 6.

<sup>b</sup> Total unique number of schools, student, and teacher records across rounds. Teacher counts include school administrators. n.a. = not applicable.

## **2. Data sources and data collection instruments**

As described in Section IV, SDPP collected the data used in this report using school questionnaires, teacher listings, teacher questionnaires, student records, and student interviews. Below, we describe the data sources and types of information collected using these instruments in more detail. Refer to Appendix K for a selection of data collection tools.

**School questionnaire.** The SDPP team administered school questionnaires to the director or deputy director at each data collection point to gather data on grades offered in the school, number of days the school was open each month of that school year, number of classes in each school grade, total number of male and female teachers, and descriptions of other active programs or interventions in the school. We also gathered enrollment, head count, and transfer data during the school director interview; these data were also recorded on the school questionnaire. We collected enrollment data from February attendance lists for start-of-year counts, and October attendance lists for end-of-year counts. We conducted a head count of students in the 3rd- through 6th- grades at the time of each data collection visit. We collected information on transfers via transfer certificates and/or lists of students who transferred into or out of the school either during the school year or between school years.

**Teacher listing and questionnaire.** At baseline, SDPP compiled a teacher listing of the director, the deputy director, and all teachers currently teaching grades 4 to 6. We then updated this teacher listing at follow-ups 1 and 3. In addition to teacher position and grades and subjects taught, the teacher listing also captured information on teacher gender, full-time status, education level, and teacher monthly attendance.

SDPP used the teacher listing to identify teachers and administrators that were eligible for the interview, which included all directors, deputy directors, and grade 4-6 math, Tetun language, Portuguese language, or homeroom teachers. The teacher interviews captured information related to teachers' experience and training, awareness of risk factors related to dropout, and attitudes and practices toward students at risk of dropping out of school. Teachers self-reported information to supplement and verify the background characteristics first gathered from school records in the teacher listing exercise. During the three rounds of data collection, approximately 90.8 percent to 100 percent of eligible teachers in SDPP and control schools responded to the questionnaire (Table A.2).

*Table A.2. Teacher questionnaire response rates, by research group*

| Data collection round                            | SDPP group | Control group |
|--|------------|---------------|
| <b>Number of surveys attempted</b>               |            |               |
| Baseline   | 282        | 279           |
| Follow-up 1                                      | 314        | 298           |
| Follow-up 3                                      | 334        | 313           |
| <b>Number of surveys completed</b>               |            |               |
| Baseline   | 282        | 279           |
| Follow-up 1                                      | 285        | 279           |
| Follow-up 3                                      | 323        | 303           |
| <b>Percentage of attempted surveys completed</b> |            |               |
| Baseline   | 100        | 100           |
| Follow-up 1                                      | 90.8       | 93.6          |
| Follow-up 3                                      | 96.7       | 96.8          |

Sources: SDPP baseline and follow-up teacher self-administered questionnaires and school records data collection, May 2012, May 2013, and September 2014.

Note: Only teachers sampled for interview and eligible to be used in the impact analyses included in these figures.

Because 100 percent of the eligible teachers in SDPP and control schools completed the survey at baseline, there is no need (and it is not possible) to compare the characteristics of teachers who responded to the survey to those who did not.

**Student Records.** We collected student records for the SY 2012 6th grade cohort students during their 6th grade, for the SY 2012 5th grade cohort students during their 5th and 6th grades, for the SY 2012 and SY 2013 4th grade cohort students during their 4th, 5th, and 6th grades, and for the SY 2014 4th grade students for their 4th grade year. The student records provided information on attendance, school performance, demographics, and enrollment.

We defined the student records sample by identifying students in all relevant classes in the grade 4-6 attendance lists. Once we compiled the student list, it was either copied onto Records Extraction (RET) data collection forms directly (baseline and follow-up 2), or cross-referenced with existing pre-filled RET forms to match and identify both new and returning students (all

follow-ups). We subsequently added students who transferred into each cohort after the initial data collection points to the RET forms when they were first encountered during data collection.

Once we defined the student record sample, we collected data on attendance and performance for each listed student from the 4th-, 5th-, and 6th- grade attendance lists and student class score books, and we recorded this data on the RET forms. We recorded the number of total days sick, absent with permission, and absent without permission for each student for each month of the school year. We collected Portuguese, Tetun, Math, and Behavior performance scores from student class score books, or “Cadernetas.” Lastly, to explicitly indicate dropout or transfer status, we gathered enrollment data at the beginning and end of each school year, using school director and teacher input to confirm student enrollment data.<sup>14</sup>

**Student interviews.** In addition to collecting data on student outcomes from school records, SDPP conducted student interviews on a subsample of students who we identified to be at risk of dropping out of school to obtain data on their attitudes toward school. We selected a subsample of at-risk students in advance of each round of student interviews. We discuss this process in the next sub-section.

The SDPP team asked students selected for interviews to report their age, gender, current grade, and mother’s highest education level; we used these data to verify information collected via student records. Students also responded to a series of questions related to their cognitive, behavioral, and emotional attitudes toward school; and their perceptions of teachers and parents.<sup>15</sup>

A similar percentage of SDPP and control group at-risk students completed the survey questionnaire at follow-ups 1 and 3 (Table A.3). At the first follow-up, 85.3 percent of at-risk students in the SDPP group and 86.7 percent in the control group responded. At the third follow-up, the response rates were 87.4 percent and 85.4 percent for the SDPP and control groups, respectively.

*Table A.3. At-risk student questionnaire response rates, by research group*

| Data collection round                            | SDPP group | Control group |
|--|------------|---------------|
| <b>Number of surveys attempted</b>               |            |               |
| Follow-up 1                                      | 2,812      | 2,722         |
| Follow-up 3                                      | 2,849      | 2,701         |
| <b>Number of surveys completed</b>               |            |               |
| Follow-up 1                                      | 2,398      | 2,360         |
| Follow-up 3                                      | 2,490      | 2,307         |
| <b>Percentage of attempted surveys completed</b> |            |               |
| Follow-up 1                                      | 85.3       | 86.7          |
| Follow-up 3                                      | 87.4       | 85.4          |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up student surveys, May 2013 and September 2014.

Note: Only at-risk students sampled for interview and eligible to be used in the impact analysis are included in these figures.

<sup>14</sup> Enrollment status is not coded in school records data. Using attendance and performance data, we identified students not likely enrolled, and then consulted appropriate school staff to determine cause.

<sup>15</sup> For each of these outcomes, we asked students whether they strongly agreed or disagreed to a set of statements (see Appendix K for the instruments).

At-risk students who responded to the questionnaire were different from those who did not respond according to most baseline characteristics (Table A.4). However, students who responded to the questionnaire had similar performance scores as those who did not respond.<sup>16</sup>

*Table A.4. Average at-risk student characteristics prior to intervention, by response to questionnaire (SY 2012 and SY 2013) (percentage unless otherwise indicated)*

|   | <b>Responded to questionnaire</b> | <b>Did not respond to questionnaire</b> |
|---|-----------------------------------|---|
| <b>Demographic characteristics</b>                        |                                   |   |
| Female  | 45.7***                           | 39.4                                    |
| Over-age for grade  | 10.1***                           | 20.4                                    |
| <b>Factors related to risk of dropout</b>                 |                                   |   |
| Daily attendance during prior school year                 | 89.6***                           | 29.1                                    |
| Academic performance during prior school year(range 1-10) |                                   |   |
| Mathematics   | 5.67                              | 5.62                                    |
| Portuguese  | 5.90                              | 5.83                                    |
| Tetun   | 6.27                              | 6.31                                    |
| School dropout risk indicator scores                      |                                   |   |
| Attendance <sup>a</sup>                                   | 1.13***                           | 1.27                                    |
| Math <sup>b</sup>   | 1.51***                           | 1.63                                    |
| Tetun <sup>c</sup>  | 1.06***                           | 1.20                                    |
| Behavior <sup>d</sup>                                     | 0.67**                            | 0.73                                    |
| <b>Sample size</b>  |                                   |   |
| <b>Students</b>   | <b>6,416</b>                      | <b>893</b>                              |
| <b>Schools</b>  | <b>191</b>                        | <b>182</b>                              |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up student surveys, May 2013 and September 2014.

Note: Differences between respondent and non-respondent group means were tested using two-tailed t-tests unless otherwise indicated. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Section III of the main report for definition of over-age for grade, daily attendance, and academic performance and behavior.

<sup>a</sup>A student received a score of 0 if he or she was never absent, 1 if he or she was absent between 1 and 3 days of school, or 2 if he or she was absent 4 or more days of school in March 2012.

<sup>b</sup>A student received a score of 0 if he or she received a 7 or higher, 1 if he or she received a 6, or 2 if he or she received a 5 or lower on his or her first trimester Tetun exam.

<sup>c</sup>A student received a score of 0 if he or she received a 7 or higher, 1 if he or she received a 6, or 2 if he or she received a 5 or lower on his or her first trimester math exam.

<sup>d</sup>A student received a score of 0 if he or she received an 8 (good) or higher, 1 if he or she received a 7 (fair) or 6 (passable), or 2 if he or she received a 5 (not passable) or lower for his or her behavior during the first trimester.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between SDPP and control group distributions is statistically significant at the .01/.05/.10 level.

<sup>16</sup> It is possible that these differences are resulting from the small sample for those who did not respond to the questionnaire.

### **C. Selection of analysis sample**

The analysis sample used in the impact evaluation is smaller than the sample of students and teachers for whom we collected any data because in the analysis sample, we included only the eligible teachers and students. For example, because SDPP was focused on grades 4 through 6, only school administrators and 4th-, 5th-, and 6th-grade math, language, or homeroom teachers were interviewed for the impact evaluation. Although we selected administrators and 4th-, 5th-, and 6th-grade math, language, and homeroom teachers based on the information in the school records, some of these teachers turned out to be ineligible based on their self-reported information from the teacher interview.

Similarly, although the SDPP team collected records for students who transferred to the school after the start of the intervention, we did not include them in our main impact analysis in order to ensure there is no bias arising from selection of the sample (selection bias). The number and characteristics of the in-transfer students are likely to be different across the SDPP and control groups if the intervention attracted more or certain types of students to the SDPP schools. Including different types students in the SDPP group sample and the control sample would result in bias in the impact estimates.

Finally, for the SY 2012 4th- and 5th- grade, and the SY 2013 4th- grade cohorts, the SDPP team drew a random sub-sample of 13 students from each school grade from the students identified as at risk of dropping out based on pre-intervention characteristics collected at baseline. These students were interviewed at baseline and follow-up 1. Similarly, for the SY 2014 4th- grade cohort, we selected an at-risk subsample of 13 students from each 4th-grade class using pre-intervention characteristics collected at follow-up 2. These students were then interviewed at follow-up 3. Because all students in Timor-Leste were identified as at-risk prior to interview, all sampled students were eligible and included in the analysis.

### **D. Assessing risk of attrition bias**

In random assignment studies, it is important to assess sample attrition, which occurs when members of the initial research sample are not part of the final analysis sample. If sample attrition is severe or very different for the SDPP and control groups, the resulting missing data can introduce bias to the impact estimates. Bias can result because the types of sample members for whom data are available might differ across research groups. In addition, studies like SDPP in which the level of random assignment (schools) and the level of analysis (students) are different, bias can arise from loss of samples at both levels.

The SDPP team analyzed the attrition rates for each primary outcome in the four domains at both levels—school and student. In Timor-Leste, only one out of the 98 schools assigned to the SDPP group attrited from the sample, while three out of the 96 control schools assigned to the control group attrited. Thus, both overall (1.5 percent) and differential (1.1 percent) attrition rates at the level of random assignment were low.

All students in the analysis for whom we collected data before they entered 4th grade (or, in the baseline year, if they were in a target grade), were part of the analysis for dropout. So, there was no attrition at the student-level for this outcome. For the attendance outcome, attrition was 4.6 percent and differential attrition was 2.4 percent. For the student attitude outcomes, approximately 15 percent of the students who were identified as at-risk and eligible for the student interview attrited from the sample.<sup>17</sup> The difference in attrition between the SDPP and control groups was low, at about 2 percent. We conclude that the risk of attrition bias is low for this analysis.

The overall attrition rate for the teacher sample was 19.6 percent. This is high compared to the attrition rates in the student samples because any teacher teaching homeroom, language, or math in the one of the target grades at baseline was considered to have attrited if they did not teach homeroom, language, or math in the one of the target grades in subsequent years of the intervention. However, the pattern of teacher attrition did not differ between the SDPP and control schools; differential attrition was 2 percent. Note that the 19.6 percent of teachers who attrited from the sample received one year or less of SDPP training. The remaining 80.4 percent of the teachers received two years of SDPP training.

---

<sup>17</sup> SDPP attempted to locate students for interview both in school and at home, including students who dropped out of school. Attrition reflects students SDPP was not able to locate.

## APPENDIX B. ANALYTIC METHODS

### A. Estimation strategy

The main goal of the SDPP impact analysis is to assess the effects of the intervention on student- and teacher-level outcomes. With well-implemented random assignment, the students and teachers in treatment schools will be similar to those in control schools in terms of their pre-existing characteristics. Thus, we could have estimated the impacts by computing the difference in average outcomes between the two groups. However, to improve the precision of our impact estimates, we used a regression framework to control for individual characteristics of students and/or teachers and baseline values of the outcomes. This approach also enabled us to explicitly account for the sampling design and clustering of students and teachers within schools.<sup>18</sup> The following linear regression model was used for both continuous and binary outcomes,<sup>19</sup>

$$(1) \quad y_{isct} = \alpha + \beta y_{isc0} + \gamma x_{isc0} + \delta z_{s0} + \lambda T_s + \eta_{sc} + \varepsilon_{ist}$$

where  $y_{isct}$  is the outcome of interest for student or teacher  $i$  in cohort  $c$  and school  $s$  at time  $t$ . (such as dropout status). Where available,  $y_{isc0}$  is the baseline (time 0) value of the outcome of interest. The vector  $x_{isc0}$  represents the baseline (time 0) characteristics of student or teacher  $i$  in cohort  $c$  in school  $s$ . The vector  $z_{s0}$  represents the baseline characteristics of school  $s$ . The variable  $T_s$  is an indicator equal to one for students or teachers in SDPP group schools and zero for those in control group schools. The term  $\eta_{sc}$  is a school-specific effect (a group or cluster effect), while  $\varepsilon_{ist}$  is a random error term for student or teacher  $i$  in school  $s$  observed at time  $t$  that is assumed to have a mean of zero conditional on other explanatory variables included in the model. The coefficient of interest,  $\lambda$ , is the regression-adjusted difference in mean outcomes between the SDPP and control groups, which gives the impact of SDPP on the outcome of interest.

Randomization was implemented at the school level. Outcomes within the same school are likely to be correlated. For example, students from the same school are likely to have similar behavioral attitudes toward school because of peer influence or because they are likely to be members of the same community. Ignoring these correlations while estimating equation (1) using student or teacher-level data would lead to an overestimate of the precision of the impacts of the program. We adjust the standard errors of the estimated parameters in equation (1) for clustering of student or teacher observations at the school level.

In addition, the regression framework allowed us to include a large number of individual- and school-level variables. These covariates included variables such as age and gender for student outcomes, education and experience for teacher outcomes, school-level enrollment and dropout for both teachers and student outcomes, and individual- and school-level baseline measures from the same domain as the outcomes (Table B.1). By controlling for individual- and school-level

---

<sup>18</sup> We used the “svy” command in Stata and specified the strata as the districts.

<sup>19</sup> For binary outcomes, this specification is referred to as a linear probability model. For binary variables, we also estimate a logistic regression model as a robustness check. We prefer the linear probability model because it is easier to interpret and relies on weaker parametric assumptions. In practice, the two approaches tend to produce similar findings if the mean of the outcome is not close to 0 or 1.

characteristics, we were able to control for any differences that could have arisen by chance or due to survey nonresponse between the SDPP and control groups, and improve the precision of the impact estimate.

*Table B.1. Control variables used in regression models to estimate SDPP's impacts*

| Unit-level variables  | School-level variables                                 |
|---|--|
| <b>Students</b>   |  |
| Student's baseline value of the outcome measure (performance only)    | Grade 4, 5, and 6 within-grade dropout (SY 2012)       |
| Whether the student is female   | Grade 4, 5, and 6 enrollment (SY 2012)                 |
| Age   | Grade 4, 5, and 6 attendance via head counts (SY 2012) |
| Student's baseline attendance   |  |
| Mother's education (student attitudes only)                           |  |
| Whether the student is overage for grade                              |  |
| Risk components used in at-risk identification based on baseline data |  |
| Attendance  |  |
| Math  |  |
| Tetun   |  |
| Behavior  |  |
| <b>Teachers</b>   |  |
| Whether the teacher is female   | Grade 4, 5, and 6 within-grade dropout (SY 2012)       |
| Age   | Grade 4, 5, and 6 enrollment (SY 2012)                 |
| Whether the teacher is a target grade teacher                         | Grade 4, 5, and 6 attendance via head counts (SY 2012) |
| Grade teacher taught at baseline                                      |  |
| Whether teacher was interviewed at baseline                           |  |
| Education   |  |
| Experience  |  |

For the impact estimate of each outcome, we used a two-tailed t-statistic to test the null hypothesis that there is no difference between the regression-adjusted means for the SDPP and control groups. We used the associated p-value, which reflects the probability of obtaining the observed impact estimate when the null hypothesis of no effect is true, to judge the likelihood that SDPP had a statistically significant impact. In *Volume 1: Main Findings*, we denote impact estimates with p-values less than 0.05 on two-tailed t-tests as statistically significant (Table B.2). We refer to impact estimates with p-values greater than 0.05 and less than 0.10 on two-tailed t-tests as marginally significant.

Table B.2. Conventions for describing statistical significance of SDPP impact estimates

| <i>p</i> -value of impact estimate | Symbol used to denote <i>p</i> -value for tables and figures presenting numeric findings | Symbol used to denote <i>p</i> -value for summary tables <sup>a</sup> | Impact estimate is considered statistically significant |
|------------------------------------|--|---|---|
| <b><i>t</i>-test</b>               |  |   |   |
| $p < 0.01$                         | ***  | +++/--  | Yes   |
| $0.01 \leq p < 0.05$               | **   | ++/--   | Yes   |
| $0.05 \leq p < 0.10$               | *  | +/-   | Yes   |
| $p \geq 0.10$                      | None   | o   | No  |
| <b>Chi-squared test</b>            |  |   |   |
| $p < 0.01$                         | †††  | +++/--  | Yes   |
| $0.01 \leq p < 0.05$               | ††   | ++/--   | Yes   |
| $0.05 \leq p < 0.10$               | †  | +/-   | Yes   |
| $p \geq 0.10$                      | None   | o   | No  |

<sup>a</sup> “+” denotes positive impact and “-“ denotes negative impact.

**Subgroup analyses.** For many outcome measures, it is conceivable that the intervention’s effects will vary by observable characteristics. SDPP specifically aimed to identify students most likely to drop out of school, or in other words, those who are “at-risk” of dropout—and improve their outcomes, thus improving overall dropout rates. Thus, estimating differential impacts for students at risk of dropping out is of particular interest for the SDPP and is part of our primary assessment of whether SDPP was effective. In addition, the SDPP team also estimated impacts for other subgroups of students and teachers, and for subgroups of schools. The subgroups based on student characteristics were student gender and whether the student was more than two years older than the appropriate age for the grade (over-age).<sup>20</sup> The subgroups based on teacher characteristics were based on teacher gender and full-time teaching status. The subgroups based on school characteristics were distance of the school to the district’s capital and percentage of at-risk students in the school.<sup>21</sup> To estimate impacts and differences in impacts for specific subgroups, we introduced appropriate interaction terms into equation (1). To examine the difference for students in the subgroup  $G$  (for example, those identified as at-risk students) from those not in the subgroup (those not identified as at risk), SDPP used the following:

$$(2) \quad y_{isct} = \alpha + \beta y_{isc0} + \gamma x_{isc0} + \delta z_{s0} + \lambda T_s + \xi(T_s \times G_{isc}) + \eta_c + \varepsilon_{isct}$$

<sup>20</sup> In Timor-Leste, 4th-grade students were defined as over-age if they were 13 or older, 5th-grade students as over-age if they were 15 or older, and 6th-grade students as over-age if they were 17 or older.

<sup>21</sup> We divided schools into a group that was at the 70th percentile or higher in percentage of at-risk students at baseline among control group schools (the high percentage group) and a group below the 70th percentile (the low percentage group). We also defined schools as remote if they could not be reached by all types of vehicles and not remote if they could.

In equation (2), the coefficients  $\xi$  provide the difference between the impacts by subgroup (for example, by at-risk status). We also estimated impacts for those in each subgroup  $G$  (for example, for at-risk students) and those not in the subgroup (for example, not at-risk students).<sup>22</sup>

## **B. Treatment of missing data**

Implementing a strategy for dealing with missing information is important for the purpose of identifying at-risk students and for covariates in the model. To define at-risk status for all students across the SDPP and control groups, the SDPP team imputed missing values for the at-risk variables in a process that consisted of two rounds of imputation for each variable. First, we imputed missing values of each at-risk variable for students who had non-missing values of that variable in earlier periods. Second, for students who were missing an at-risk variable in all time periods but were not missing all at-risk components, we imputed any remaining missing values for the at-risk variable using non-missing values of the other at-risk components. Each of these rounds had three steps: (1) modeling the relationship between the variables of interest; (2) using the model to predict values of the at-risk variable in the most recent period; and (3) replacing missing values with the predicted values. Taking attendance as an example, we constructed a model of the relationship between attendance in the reference month—the most recent month available with adequate completeness—and attendance in other periods, as well as the other input variables used to construct the at-risk scores. This model was then used to impute missing attendance values using students’ non-missing values for the model’s input variables.

Similarly, imputing missing values for the covariates is important to minimize selection bias. Students or teachers who have missing covariate data may be systematically different from those with complete data; excluding these observations could introduce selection bias to impact findings. We included an indicator for each missing covariate in the regression. Moreover, for continuous variables, we imputed missing covariates by replacing the value with the school mean if the variable was missing for a subsample in the school, or with the sample mean if it was missing for the entire school.

## **C. Approach to multiple comparisons**

Examining effects on numerous outcomes increases the chance of falsely identifying an impact as significant (Schochet, Peter Z 2009). To minimize this possibility, the SDPP research design assessed program effectiveness using a small set of primary outcomes and adjusted for multiple comparisons in domains with multiple primary outcomes.

The SDPP impact analysis focused on outcomes organized into five domains: (1) teacher behavior and attitudes, (2) student attitudes, (3) student engagement in school, (4) school dropout, and (5) progression in school. Because improvement in progressing in school is not a central objective of the SDPP interventions, we do not include any progression outcomes in primary analyses. For the other domains, we identify primary and secondary outcomes, taking into consideration the goals of the SDPP interventions (Table B.3). Using a small set of primary outcomes within each domain makes it less likely that statistically significant findings will emerge by chance. Moreover, selecting the primary outcomes before beginning analysis prevents focusing the assessment of

---

<sup>22</sup> We used the “margins” command in Stata to compute means and impact for each subgroup.

program effectiveness on outcomes that happen to emerge as statistically significant (or the perception that this may have been the case). The main focus of the analysis is the impact estimates for primary outcomes, but the main report also examines secondary outcomes to provide additional context and obtain a better understanding of the pathways through which SDPP may be having an effect (or not).

*Table B.3. Primary outcomes in key domains*

| Key domain                | Primary outcome                           |
|---------------------------|---|
| <b>Teachers</b>           |   |
| Teacher outcomes          | Teacher dropout prevention practice scale |
| <b>Students</b>           |   |
| School dropout            | Global dropout rate                       |
| Engagement in school      | Daily attendance rate                     |
| At-risk student attitudes | Emotional attitudes toward school         |
|                           | Cognitive attitudes toward school         |
|                           | Behavioral attitudes toward school        |

For the student attitudes domain, which has multiple primary outcomes, we made a statistical adjustment to address the problem of multiple comparisons. Specifically, we used the Benjamini-Hochberg correction, which adjusts the statistical significance level for each outcome in the domain by the number of comparisons made in the domain (Benjamini, Yoav and Yosef Hochberg 1995). The impact on behavioral attitudes toward school is statistically significant at the 1 percent level with and without the multiple comparisons adjustment (Table B.4). We find no statistically significant impacts on cognitive and emotional attitudes toward school with and without the multiple comparisons adjustment.

*Table B.4. Statistical significance of at-risk student attitudes outcomes using standard p-value thresholds and thresholds adjusted for multiple comparisons*

| Outcome              | Standard thresholds for statistical significance | Adjusted thresholds for statistical significance |
|----------------------|--|--|
| Emotional attitudes  | o  | o  |
| Cognitive attitudes  | o  | o  |
| Behavioral attitudes | +++  | +++  |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up student surveys, May 2013 and September 2014.

Note: Impacts were adjusted for multiple comparisons using the Benjamini-Hochberg method.

+++/+++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

o No statistically significant impact.

Similarly, when conducting analyses on multiple subgroups, the likelihood of identifying a false impact increases. SDPP therefore selected the primary samples for the analysis as the full sample of students and the sample of at-risk students. All additional subgroup analyses are exploratory.

## D. Sensitivity tests

We conducted additional analyses to examine the robustness of the impact estimates. These sensitivity tests included alternative definitions of the outcomes, a specification without covariates, and an alternative specification using a logit model.

**Alternative definitions of outcomes.** We also tested the impacts of SDPP in each domain using alternative definitions of the outcomes. Appendices C through G present the different measures used in each outcome domain and findings using alternative definitions.

**Specification without covariates.** For the primary measures within each domain, we estimated impacts without covariates using the following regression specification:

$$(3) \quad y_{isct} = \alpha + \lambda T_s + \varepsilon_{isct}$$

which differs from equation (1) in that it does not include baseline values of the outcome, baseline characteristics of the student or teacher, baseline characteristics of the school, and the school-specific effects. We still accounted for sampling design and clustered the standard errors at the school level. We find positive, statistically significant impacts on the teacher dropout prevention practice scale and behavioral attitudes; a positive, marginally significant impact on attendance; and no impacts on dropout using the “no covariate” model; these findings are consistent with the main impact findings (Table B.5).

*Table B.5. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline, by estimation method (SY 2013 and SY 2014)*

|   | Primary       | Logit         | No covariates |
|---|---------------|---------------|---------------|
| <b>Teacher Outcomes</b>   |               |               |               |
| Teacher dropout prevention practice scale (range: 1 to 8)                     | +++           | n.a.          | +++           |
| <b>At-Risk student attitudes toward school</b>                                |               |               |               |
| Emotional attitudes toward school   | o             | n.a.          | o             |
| Cognitive attitudes toward school   | o             | n.a.          | o             |
| Behavioral attitudes toward school  | +++           | n.a.          | +++           |
| <b>School engagement</b>  |               |               |               |
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) | ++            | n.a.          | +             |
| <b>School dropout</b>   |               |               |               |
| Global dropout rate   | o             | o             | o             |
| <b>Sample Size</b>  |               |               |               |
| <b>Schools</b>  | <b>191</b>    | <b>191</b>    | <b>191</b>    |
| <b>Students</b>   | <b>28,503</b> | <b>28,503</b> | <b>28,503</b> |
| <b>Teachers</b>   | <b>818</b>    | <b>n.a.</b>   | <b>818</b>    |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up student surveys, May 2013 and September 2014; baseline and follow-up teacher self-administered questionnaires, May 2012, May 2013, and September 2014.

Note: The analysis is based on 4th-, 5th-, and 6th-grade students and homeroom, math, and language teachers during SY 2013 and SY 2014.

Impacts for at-risk student attitudes toward school were adjusted for multiple comparisons using the Benjamini-Hochberg method.

n.a. = not applicable.

+++/++/+ Statistically significant positive impact at the .01/.05/.10 level.

---/--/- Statistically significant negative impact at the .01/.05/.10 level.

o No statistically significant impact.

**Alternative specifications.** We also tested the robustness of the model by using an alternative model specification. We used the following logistic regression model to estimate the impact on the dropout rate:

$$(4) \quad \Pr(y_{icst} = 1) = F(\alpha + \beta y_{isco} + \gamma x_{isco} + \delta z_{s0} + \lambda T_s + \eta_c)$$

where  $F(z) = e^z / (1 + e^z)$

The impacts found using this model are consistent with the findings presented in the main impact report (Table B.5). We find no impacts on dropout using the logistic regression model.

## **APPENDIX C. ANALYZING TEACHER AND SCHOOL ADMINISTRATOR OUTCOMES**

The primary goal of the SDPP Program was to reduce school dropout. As shown in the logic model in Section III of *Volume 1: Main Findings*, changing teachers' practices was hypothesized as a first step toward reducing school dropout. Thus, impacts on teachers' knowledge and practices could be interpreted as early signs that SDPP is working its way through the theory of change. As discussed in the main report, teachers from SDPP schools scored higher than teachers in control schools on teacher dropout prevention practices—the primary outcome in the teacher behavior and attitudes domain—and on the teacher's sense of self-efficacy scale, a secondary outcome; both differences were statistically significant. We found no impact on teacher's sense of responsibility toward at-risk students, the second secondary outcome in the domain. In this section, we discuss teacher turnover from year to year, describe the construction of the teacher outcomes examined in the main report, as well as additional outcomes in the domain, and report findings on the additional outcomes for teachers and on outcomes for school administrators.

### **A. Teacher turnover**

Before discussing the details of the outcomes related to teachers, we first examine teacher turnover in the study schools during the period of implementation, and whether they differed between SDPP and control group schools. At baseline, there were 311 4th-, 5th-, and 6th-grade homeroom teachers in SDPP schools, and 304 in control schools. Homeroom teachers were particularly important for the successful implementation of the SDPP intervention, as they were responsible for monitoring at-risk students' attendance and contacting parents if students were absent consistently. However, it could take some time for teachers to become familiar and fully implement the new procedures instituted through SDPP, and teachers may become more effective with experience. To assess whether teachers had more than one year of exposure to SDPP, and if SDPP had impacts on teacher turnover, we measured the rate of teacher turnover in SDPP and control schools. We found that 60.13 percent and 52.30 percent of SDPP and control school 4th-, 5th-, and 6th-grade homeroom teachers from baseline, respectively, were still 4th-, 5th-, and 6th-grade homeroom teachers in SY 2013 (the first full year of program implementation); the difference between the two groups was not statistically significant (Table C.1). In SY 2014 (the second year of SDPP implementation), we found that 44.05 percent compared to 32.24 percent of 4th-, 5th-, and 6th-grade homeroom teachers from baseline in SDPP and control schools, respectively, were still 4th-, 5th-, and 6th-grade homeroom teachers; this difference was statistically significant.

*Table C.1. Likelihood of base cohort of grade 4, 5, and 6 homeroom teachers to continue teaching in target grade the following year (SY 2013 and SY 2014) (percentage)*

|  | <b>SDPP group</b> | <b>Control group</b> | <b>Impact</b> | <b>p-value</b> |
|--|-------------------|----------------------|---------------|----------------|
| Remained Grade 4, 5, or 6 teacher in SY 2013 | 60.13             | 52.30                | 7.83          | 0.05           |
| Remained Grade 4, 5, or 6 teacher in SY 2014 | 44.05             | 32.24                | 11.81**       | 0.00           |
| <b>Sample size</b>                           |                   |                      |               |                |
| <b>Teachers</b>                              | <b>311</b>        | <b>304</b>           |               |                |
| <b>Schools</b>                               | <b>97</b>         | <b>94</b>            |               |                |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: Likelihood outcome is the number of 4th-, 5th-, and 6th-grade homeroom teachers in a given year, who also taught 4th-, 5th-, or 6th-grade homeroom at baseline, divided by the total number of 4th-, 5th-, and 6th-grade homeroom teachers at baseline. The analysis is based on 4th-, 5th-, and 6th-grade teachers during SY 2013 and SY 2014.

Differences between SDPP and control group means were tested using two-tailed t-tests.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

## **B. Details on primary and secondary teacher outcomes**

We constructed scales of outcomes by grouping together survey questions that were similar in nature. This helped us focus on and better interpret the impacts on the broader outcomes rather than individual survey items. Also, by constructing scales, we were able to reduce the number of outcomes for which we estimated impacts, thus helping to avoid finding impacts where none actually existed (see Appendix B for a discussion of multiple comparisons).

*Teacher dropout prevention practice scale.* The teacher dropout prevention practice scale is the primary outcome in the teacher behavior and attitudes domain. The scale represents the sum of teacher responses to eight items that ask whether teachers take certain actions related to reducing a student's likelihood of school dropout. The eight items indicate whether the teacher reported the following:

- 1) Recording daily attendance;
- 2) Taking action if a student is absent for three days in a month;
- 3) Giving weak students feedback;
- 4) Discussing support for weak students with other teachers;
- 5) Developing plans to support weak students;
- 6) Communicating with parents of weak students;
- 7) Meeting with weak students; and
- 8) Being willing to come early or stay late to help weak students.

We conducted an exploratory factor analysis on these items using the baseline teacher self-administered questionnaires, to confirm that there is one underlying construct that is captured by teacher responses to these items. Factor analysis is a data reduction technique that attempts to reduce a group of survey items into one or more unobserved variables, or “factors.” The key idea of a factor analysis is that individual responses to a set of survey items—the observed variables—have similar patterns because they are all associated with one or more latent unobserved variables—the factors. Each factor explains a certain amount of the overall variance in the observed variables. In a factor analysis, only the factor(s) that explains more variances than a single observed item is retained. The factors are then constructed as a linear combination of the survey items. The weights associated with each survey item for the linear combination are called factor loadings, which measure the correlation between a survey item and the underlying factor. Our factor analysis identified one factor that explained a substantial proportion of the total variance in the items,<sup>23</sup> which justifies grouping the items above to create the dropout prevention practice scale.

To assess the robustness of our findings of no impact on the teacher dropout prevention practice scale, we also examined the impact of SDPP on an alternative construction of the scale. Whereas the primary construction presented in the main report was a direct sum of teacher responses to the eight individual items listed above, this alternative construction involved using a weighted sum. We used the factor loadings generated during our exploratory factor analysis as the weights. We used factor loadings from the baseline factor analysis, as they represent how the individual survey items were related to the scale before the intervention began. Consistent with the primary measure, we find a positive impact of SDPP on the teacher dropout prevention practice scale using factor scores (Table C.2).

*Table C.2. Impact of the SDPP Program at endline on alternative construction of teacher dropout prevention practice scale (SY 2013 and SY 2014)*

| Outcome  | SDPP group | Control group | Impact  | p-value |
|--|------------|---------------|---------|---------|
| Teacher dropout prevention practice scale factor score | 2.15       | 2.11          | 0.05*** | 0.01    |
| <b>Sample size</b>                                     |            |               |         |         |
| <b>Teachers</b>  | <b>412</b> | <b>406</b>    |         |         |
| <b>Schools</b>   | <b>97</b>  | <b>93</b>     |         |         |

Source: SDPP baseline and follow-up teacher self-administered questionnaires and school records data collection, May 2012, May 2013, and September 2014.

Note: To estimate factor scores, we used factor loadings that were generated during our exploratory factor analysis on the eight component items of the teacher dropout prevention practice scale, using the iterated principal factor method, conducted on the baseline teacher self-administered questionnaire in Tajikistan. The analysis is based on 4th-, 5th-, and 6th-grade homeroom, math, and language teachers during SY 2013 and SY 2014.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of teachers within schools, and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

<sup>23</sup> It was the only factor with an eigenvalue greater than 1.

*Teachers' sense of responsibility.* We constructed the teachers' sense of responsibility for at-risk students scale, a secondary outcome in the domain, by taking the mean of teacher responses to five survey questions. The questions asked teachers to what degree they agreed with five statements about at-risk students:

- 1) Students at risk of dropping out of school should work harder.
- 2) There is little that can be done by the teacher or school to help students who are at risk of dropout.
- 3) If a student is at risk of dropping out, it is mainly the fault of the parent/guardian or family.
- 4) At-risk students face too many challenges to succeed in school.
- 5) At-risk students need more help than teachers have time or resources to provide.

The responses ranged from 1 (strongly agree) to 4 (strongly disagree). Higher scale values correspond to higher sense of teacher responsibility for at-risk students.

*Teachers' sense of self-efficacy.* We constructed the teachers' sense of self-efficacy scale, another secondary outcome in the domain, by taking the mean of teacher responses to 12 items. Teachers were asked to what extent they could address factors associated with risk for school dropout:

- 1) Control disruptive behavior in the classroom;
- 2) Motivate students with low interest in school;
- 3) Encourage students to believe they are capable of succeeding in school;
- 4) Help students value learning;
- 5) Make lessons interesting for students;
- 6) Enforce classroom rules;
- 7) Encourage active participation among students not engaged;
- 8) Identify students needing extra support;
- 9) Improve student attendance;
- 10) Modify teaching and learning activities to help weak or poorly performing students;
- 11) Assist families in helping their children do well in school; and
- 12) Help poor-performing students to do better in school.

Responses range from 1 (nothing) to 5 (a great deal). Higher scale values correspond to higher sense of self-efficacy. This scale was adapted from Tschannen-Moran, Megan and Anita Woolfolk 2001.<sup>24</sup>

---

<sup>24</sup> The psychometric properties of this scale have been examined in Greece; it performed well in that context (Tsigilis, Nikolaos, Athanasios Koustelios, and Vasilios Grammatikopoulos 2010).

In addition to the primary and secondary outcomes discussed in the main report, SDPP examined impacts on six additional measures: one related to actions taken to reduce dropout, two related to teacher training, and three related to teachers' understanding of dropout. To measure actions related to dropout, we asked teachers whether they spoke to parents, students, administrators, or other teachers about a struggling student's attendance, performance, or behavior in the past month. We then constructed an outcome equal to the percentage of possible actions taken by the teacher (out of a possible 8).<sup>25</sup> There was no impact on the teacher attendance rate. Teachers in SDPP schools made fewer types of contacts with parents, students, administrators, or other teachers than in control schools; this difference was marginally significant.

*Table C.3. Impacts of the SDPP Program at endline on additional teacher outcomes (SY 2013 and SY 2014)*

| Outcome   | SDPP group | Control group | Impact   | p-value |
|---|------------|---------------|----------|---------|
| <b>Actions related to dropout</b>   |            |               |          |         |
| In past month teacher spoke to parents, students, administrators, or other teachers regarding students' attendance, performance, or misbehavior | 72.5       | 77.3          | -4.8*    | 0.09    |
| Attendance rate (January–March, 2013, January–March, 2014)  | 97.6       | 96.6          | 0.9      | 0.23    |
| <b>Training and knowledge related to dropout risk</b>   |            |               |          |         |
| Received training related to at-risk students   |            |               |          |         |
| Ever  | 89.8       | 23.0          | 66.8***  | 0.00    |
| In the past year  | 57.7       | 9.3           | 48.4***  | 0.00    |
| After 15-30 absences a student is considered a dropout  | 55.9       | 57.9          | -1.9     | 0.69    |
| Teacher considers 3 or more absences per month excessive  | 38.7       | 61.3          | -22.7*** | 0.00    |
| Percentage of risk factors identified for school dropout (out of 8)   | 32.2       | 31.5          | 0.8      | 0.76    |
| <b>Sample size</b>  |            |               |          |         |
| <b>Teachers</b>   | <b>412</b> | <b>406</b>    |          |         |
| <b>Schools</b>  | <b>97</b>  | <b>93</b>     |          |         |

Source: SDPP baseline and follow-up teacher self-administered questionnaires and school records data collection, May 2012, May 2013, and September 2014.

Note: The analysis is based on 4th-, 5th-, and 6th-grade homeroom, math, and language teachers during SY 2013 and SY 2014.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of teachers within schools and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

<sup>25</sup> The eight possible actions were: (1) contacted parents about attendance; (2) contacted parents about performance; (3) contacted parents about misbehavior; (4) spoke to students about attendance; (5) spoke to students about performance; (6) spoke to students about misbehavior; (7) spoke to director about students' attendance, performance, or misbehavior; and (8) spoke to other teachers about students' attendance, performance, or misbehavior.

SDPP used two measures of teacher training related to at-risk students. The first training measure captured whether the teacher had ever received training related to at-risk students. The second captured whether teachers had received training in the past year. A higher percentage of SDPP school teachers reported ever receiving training and receiving training in the past year related to at-risk students than control group teachers (Table C.3). In the SDPP schools, 90 percent of teachers reported ever receiving training related to at-risk students, compared to 23 percent of teachers in control schools. This difference was statistically significant. This finding shows that SDPP school teachers had received training related to at-risk students at a much higher rate than control school teachers; however, a sizable portion of SDPP school teachers, 10 percent, had never received any training related to at-risk students, which could inhibit the results of the SDPP Program. About 58 percent of SDPP teachers had received training related to at-risk students in the past year, compared to 9 percent of control school teachers, and this difference was statistically significant.

The first measure we used to measure teachers' understanding of dropout was whether teachers thought a student was considered a dropout after 15–30 absences.<sup>26,27</sup> The second measure was whether the teacher considered three or more absences in a month to be excessive.<sup>28</sup> The third measure was constructed from a list of eight risk factors for school dropout; it was constructed to equal the percentage of risk factors that teachers correctly identified.<sup>29</sup> We found a negative impact of SDPP on one of the three measures of knowledge related to dropout risk (Table C.3). In SDPP schools, 39 percent of teachers considered three or more student absences in one month excessive, compared to 61 percent of teachers in the control group schools. This difference was statistically significant. We found no impacts on the other two measures of knowledge related to dropout risk.

### **C. School administrator outcomes**

School administrators, including school directors and deputy directors, have a lot of influence over the direction of their schools. Administrators are able to directly influence teachers and, through this, indirectly influence students. Administrators are also sometimes called upon to weigh in directly on matters regarding particular students. Administrators set standards for teachers and students to follow and can influence the school culture. To assess the effect the SDPP Program had on administrators, we examined the same outcomes for administrators that we did for teachers.

Administrators in both the SDPP and control group schools scored highly on the teacher dropout prevention practice scale. SDPP school administrators scored 7.9 compared to 7.7 for control

---

<sup>26</sup> The other responses allowed were 31–60 days, 61–90 days, 91–120 days, 121 days or more, or they are not considered a dropout during the school year.

<sup>27</sup> This measure (used across the four countries) relates only to teachers' perceptions of absenteeism and how much in practical terms implies that the student has been absent so much that he or she may become a school dropout; there is no correct answer.

<sup>28</sup> We asked teachers how many days per month they thought was an excessive amount of student absenteeism. The choices were: 1–2 absences a month, 3–5 absences a month, 6–8 absences a month, and 9 or more absences a month.

<sup>29</sup> Risk factors include misbehaves, easily influenced by friends, does not socialize with others, has poor academic performance, fails to turn in homework, is frequently absent or tardy, lacks classroom participation, and disrespects school personnel and other students.

school administrators (Table C.4). This difference was not statistically significant. There were no impacts for SDPP administrators on the teacher’s sense of responsibility for at-risk students scale or the teacher’s sense of self-efficacy scale. Administrators in SDPP group schools made 71 percent of the possible types of contacts to parents, students, other administrators, or teachers regarding students’ attendance, performance, or behavior, compared to 78 percent for control group administrators. This difference was statistically significant.

*Table C.4. Impacts of the SDPP Program at endline on school administrator outcomes (SY 2013 and SY 2014)*

| Outcome   | SDPP group | Control group | Impact  | p-value |
|---|------------|---------------|---------|---------|
| <b>Actions related to dropout</b>   |            |               |         |         |
| In past month administrator spoke to parents, students, administrators, or other teachers regarding students’ attendance, performance, or misbehavior | 71.2       | 78.1          | -6.9**  | 0.05    |
| Attendance rate (January–March, 2013, January–March, 2014)  | 97.9       | 97.6          | 0.3     | 0.73    |
| <b>Training and knowledge related to dropout risk</b>   |            |               |         |         |
| Received training related to at-risk students   |            |               |         |         |
| Ever  | 89.3       | 23.3          | 66.0*** | 0.00    |
| In the past year  | 58.1       | 10.3          | 47.8*** | 0.00    |
| After 15–30 absences a student is considered a dropout  | 59.2       | 59.1          | 0.1     | 0.99    |
| Administrator considers 3 or more absences per month excessive  | 45.5       | 59.1          | -13.6** | 0.02    |
| Percentage of risk factors identified for school dropout (out of 8)   | 40.7       | 32.9          | 7.8**   | 0.02    |
| <b>Sample size</b>  |            |               |         |         |
| <b>School Administrators</b>  | <b>185</b> | <b>176</b>    |         |         |
| <b>Schools</b>  | <b>96</b>  | <b>94</b>     |         |         |

Source: SDPP baseline and follow-up teacher self-administered questionnaires and school records data collection, May 2012, May 2013, and September 2014.

Note: The analysis is based on school administrators during SY 2013 and SY 2014.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of administrators within schools and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

There were statistically significant impacts on training and knowledge related to dropout risk (Table C.4). In SDPP schools, 89 percent of administrators had ever received training related to at-risk students, and 58 percent of administrators had received training in the past year. Only 23 percent of administrators in control schools had ever received training and 10 percent had received training in the past year. The differences between SDPP and control school administrators in both of these measures were statistically significant. In both the SDPP and control group schools, 59 percent of administrators considered a student a dropout if he or she was absent 15–30

times. About 46 percent of administrators in SDPP group schools considered three or more absences per month excessive, compared to 59 percent of control group administrators, a statistically significant difference. Administrators in SDPP schools identified an average of 41 percent of a list of 8 risk factors for school dropout, compared to control school administrators, who only identified an average of 33 percent of the risk factors. The difference between SDPP and control school administrators was significant.

## APPENDIX D. ANALYZING AT-RISK STUDENT ATTITUDES

A main component of the EWS is to target extra resources toward students identified through the designation process as at risk of school dropout. As described in Section II in *Volume 1: Main Findings*, at-risk students received extra support from homeroom teachers, who closely monitored their attendance, performance, and behavior and addressed students and/or their parents when students declined in these areas. Given the extra attention provided to at-risk students, it would not be surprising to see results among these students first. The SDPP evaluation assessed the attitudes of a sample of students from our survey data that we identified as at risk through the use of pre-intervention data using a method that mimicked the EWS designation process in schools to the extent possible (see Appendix A for details). In the main report, we examined impacts on scales for emotional, cognitive, and behavioral attitudes toward school; primary outcomes in the student attitudes domain; and students' perceptions of teachers and students' perceptions of parental support—secondary outcomes in the domain. In this appendix, we describe the construction of the outcomes in the student attitudes domain.

The SDPP team constructed the student attitude and perception outcomes by grouping together survey questions that were similar in nature.<sup>30</sup> Students responded either “yes” or “no” to the survey items. Survey items were reverse coded when necessary so that a higher percentage of items the student agreed to could be interpreted as more favorable responses. Scales were constructed by taking a simple average of the scale items. To get missing scale scores, we coded those students missing responses for more than half of the items.

We used confirmatory factor analysis on the baseline survey in Tajikistan and Cambodia to assess whether the questions grouped together to construct each of the scales indeed explained one underlying factor, which is implicit in the construction of a scale. We were not able to conduct factor analysis based on responses in Timor-Leste because we did not conduct a baseline survey there. As discussed in Appendix C, factor analysis searches for unobserved measures (factors) can best account for the shared variance in the individual items. It also helps identify groups of items jointly related to each other. The SDPP team identified five scales to measure student attitudes.

*Emotional attitudes toward school.* The emotional attitude scale is based on student responses to the following 6 survey items related to how students feel about school:

- 1) School is a fun place to be.
- 2) There are teachers I can talk to.
- 3) I participate in school activities after school.
- 4) I enjoy participating in class activities.
- 5) I look forward to school.
- 6) A tutoring program would help me with my studies.

---

<sup>30</sup> The survey was developed through developing and testing new questions and adapting existing student engagement, cognitive and behavioral attitudes surveys (see Fredericks, Jennifer A., Phyllis Blumenfeld, Jeanne Friedel, and Alison Paris, 2005; and Finlay, Krystina A. 2006.).

*Cognitive attitudes toward school.* The cognitive attitude scale is based on student responses to 9 survey items related to how students think about school:

- 1) I will complete the grade I'm in.
- 2) Completing the grade I'm in will be useful to me and my family.
- 3) Missing school affects my performance in school.
- 4) Doing homework helps me do well in school.
- 5) I am interested in the work I get to do in my classes.
- 6) I check my school work for mistakes.
- 7) I need extra help with my studies or homework.
- 8) I have difficulty paying attention in school.
- 9) I try to do my best at school, even if it is not perfect.

*Behavioral attitudes toward school.* The behavioral attitude scale is based on student responses to 10 survey items related to how students act at school:

- 1) I have thought about dropping out.
- 2) I attend school regularly.
- 3) I reach school on time.
- 4) I stay home from school even if I am not sick.
- 5) I skip classes during school.
- 6) I skip school or miss classes without telling my parents.
- 7) I do the homework assigned to me.
- 8) I follow the rules at school.
- 9) I get in trouble at school.
- 10) I have difficulty getting along with other students.

*Student perceptions of teacher support.* This scale is based on student responses to 11 survey items related to how students perceive the support provided by their teachers:

- 1) I have had difficulty getting along with my teacher(s).
- 2) My teacher(s) cares about how I'm doing.
- 3) My teacher(s) talks to me about how I did on my homework and/or exams.
- 4) My teacher(s) helps me if I am having problems with a lesson.
- 5) I feel comfortable asking my teacher(s) for help with my lessons.
- 6) My teacher(s) talks to me if I miss school or class.
- 7) My teacher(s) thinks I am capable of completing my current grade.

- 8) My teacher(s) has talked to me about my future plans.
- 9) My teacher(s) has contacted my parents about my school work.
- 10) My teacher(s) has contacted my parents about my attendance.
- 11) My teacher(s) and my classmates encourage me not to drop out.

*Student perceptions of parental support.* This scale is based on student responses to 10 survey items related to how students perceive the support provided by their parents:

- 1) My parents know when I have not completed my homework and assignments.
- 2) My parents have talked with my teacher about my exam scores or absences.
- 3) My parents have talked with my teacher about my attendance.
- 4) My parents make sure I go to school every day.
- 5) It is important to my parents that I do well in school.
- 6) My parents attend school events.
- 7) My parents talk to me about improving my grades.
- 8) My parents try to support me with my studies.
- 9) My parents free up my time for schoolwork.
- 10) My parents want me to complete my current grade.

## APPENDIX E. ANALYZING SCHOOL ENGAGEMENT

The SDPP team assessed the impact of the SDPP intervention on student engagement to answer questions such as: “Does the student continue to attend school regularly?” and “Is his/her academic performance satisfactory?” As discussed in the main report, we found a significant impact of the intervention on average daily attendance, the primary outcome in the engagement in school domain, and no impacts of SDPP on academic performance, secondary outcomes in the engagement in school domain. Here, we describe the measures of engagement in school that we used and present findings on impacts of SDPP on alternate measures of attendance.

**Primary measure of attendance.** The primary measure of attendance presented in Section VI.C of the main report is defined as the percentage of school days a student attended during the school year. To construct this measure, SDPP created monthly percentages and averaged them for the most recent school year. We calculated monthly percentages as the number of days attended each month divided by the total number of school days in that month. Thus, the primary measure of attendance is defined as follows:

$$(5) \quad \sum_{i=1}^{11} \left( \frac{\text{Days Attended}_i}{\text{Days School Open}_i} \right)$$

where  $i$  corresponds to each month in the school year. If there was a spell of missing attendance data leading up to the end of the year longer than one month, we set attendance to 0 for all months in that spell, assuming the student has dropped out and thus did not attend school. By the same assumption, if a student dropped out between grades, the spell of missing attendance data from the start of the next school year was set to 0.<sup>31</sup> We treated all other missing attendance values as missing.

**Additional measures of attendance.** In addition to the primary measure of attendance described above, we also used two alternate measures of attendance: (1) an alternative measure of yearly attendance constructed similarly, but that set all missing attendance values to 0, assuming missing attendance information always results from students being absent; and (2) a monthly measure of attendance using the last month of the school year that treats missing attendance data the same way as the primary measure of attendance. The monthly measure is defined as:

$$(6) \quad \frac{\text{Days Attended}_j}{\text{Days School Open}_j}$$

where  $j$  is the last month of the school year, which in Timor-Leste is November.<sup>32</sup> Consistent with our findings for the primary measure, we find a significant impact on the alternative yearly measure of attendance (Table E.1). There was no impact for the attendance rate in the last month of the school year.

---

<sup>31</sup> This was done to ensure there is no bias in the findings related to attendance resulting from differential dropout across SDPP and control schools.

<sup>32</sup> In 2013, the school year ended in October.

*Table E.1. Impacts of the SDPP Program on alternative attendance measures at endline (SY 2013 and SY 2014)*

| <b>Outcome</b>   | <b>SDPP group</b> | <b>Control group</b> | <b>Impact</b> | <b>p-value</b> |
|--|-------------------|----------------------|---------------|----------------|
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) <sup>a</sup> | 81.0              | 78.8                 | 2.2**         | 0.04           |
| Daily attendance rate–month (October 2013; November 2014)                                  | 75.8              | 74.7                 | 1.2           | 0.48           |
| <b>Sample size</b>   |                   |                      |               |                |
| <b>Students</b>  | <b>13,645</b>     | <b>13,702</b>        |               |                |
| <b>Schools</b>   | <b>97</b>         | <b>94</b>            |               |                |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools, and cohort fixed effects.

<sup>a</sup> Missing values for number of days absent in the month were replaced with zero in the calculation of daily attendance rate for the alternate yearly measure.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

**Academic performance.** Academic performance is considered a secondary outcome because it is not a central focus of the SDPP interventions. Moreover, impact estimates for academic performance may be biased downward if the program was successful in keeping low-performing students in school, which would result in more low-performing students in the SDPP schools than in the control schools. The measures of academic performance we used in Section VI.C of the main report focused on math, Portuguese language, and Tetun language exam scores, and behavior grade from the 3rd trimester tests for students enrolled at the time. Exam scores are measured on a ten point scale from 1 to 10, with higher scores signifying higher academic achievement. The behavior grade is also measured on a ten-point scale.<sup>33</sup>

<sup>33</sup> A grade of 1 is “Terrible,” a grade of 2 is “Very bad,” a grade of 3 is “Bad,” a grade of 4 is “Poor,” a grade of 5 is “Not passable,” a grade of 6 is “Passable,” a grade of 7 is “Fair,” a grade of 8 is “Good,” a grade of 9 is “Very good,” and a grade of 10 is “Excellent.”

## APPENDIX F. ANALYZING SCHOOL DROPOUT

The central aim of the SDPP Program was to reduce dropout. However, as discussed in the main report, SDPP had no impact on the global dropout rate—the primary outcome in the school dropout domain. Here, we describe the dropout measure used in the SDPP evaluation and present findings on impacts on measures using alternative definitions of the primary and secondary dropout outcomes.

**Global dropout.** The primary outcome in the school dropout domain in Timor-Leste is a “global” dropout measure that considers students to be dropouts if they were no longer continuing their education at the last possible time we observed them. Students who started the program in grades 4 and 5 in the first year of implementation were considered to have dropped out if they did not complete their final grade 6 examinations in subsequent years. Students who started the program in grade 4 in the second and third years of implementation were considered to have dropped out if they did not enroll in school for the 2015 school year (as grade 5 and 6 students, respectively). Therefore, this global dropout measure is composed of the latest between-grade dropout measure for the SY 2013 and SY 2014 4th-grade student cohorts, measured at the beginning of SY 2015; and the latest within-grade dropout for the SY 2012 5th-grade student cohort measured at the end of SY 2013 and for the SY 2012 4th-grade student cohort measured at the end of SY 2014. Between-grade dropout is calculated across academic years and is expressed as whether a student enrolled in 4th grade is enrolled again, in any grade, at the beginning of SY 2015, the last time data was collected. This is different than grade progression in that students who repeat grades are not considered between-grade dropouts, but are not considered to have progressed.<sup>34</sup> Within-grade dropout is defined by whether a student who was enrolled in school at the beginning of the school year and was exposed to the intervention for at least one year is still enrolled at the end of his/her 6th grade year. A student was considered to be a within-grade dropout if he/she missed any of the three 3rd trimester exams.

For the between-grade dropout measure, we counted students who transfer out of the school as dropouts, which allowed us to reduce the amount of “noise” in the impact estimates caused by low-quality transfer data. Although this measure overstates the rate of dropout from any school because some transfer-out students are obviously not dropouts, transfers due to external factors (family mobility, seasonal labor, and so on) should affect SDPP and control schools equally. Thus, impact estimates are not biased due to this type of transfer. However, the impact estimate includes both the impact on dropout from any school and the impact on transfers out of the sample school due to the intervention (and not to external factors). If the intervention decreased the likelihood that students would transfer out of schools, then treating students that transferred out as dropouts overestimates SDPP’s impact on dropout.

In addition to the primary global dropout measure, the SDPP team used two alternative measures of global dropout: (1) a measure that uses the same definition for between-grade dropout as the primary measure, but defines within-grade dropout by whether the student attended the last three months of the school year; and (2) a measure that considers a student to be a between-grade dropout

---

<sup>34</sup> We also analyze grade progression, which is defined as students enrolling in the next grade or higher in the following school year. Grade repeaters under this definition are considered to not have progressed. We discuss the analysis of grade progression below.

if he/she was not enrolled in the next school year and did not transfer out of the school. Consistent with our findings for the primary global dropout measure, we do not find impacts of SDPP on measures using alternative definitions of global dropout (Table F.1).

As with the between-grade measure in the primary measure, this alternative one (incorporated into the second alternative global dropout measure) incorporates the effects that the intervention may have had on students' propensities to transfer into or out of study schools. If the intervention decreased the likelihood that students would transfer out of schools, then treating students that transfer out as enrolled might underestimate the SDPP's impact on dropout. However, because we could not verify if students actually enrolled in the school to which they said they were going to transfer, there is still some measurement error in assigning enrollment status to students who have left the school. Because we are uncertain about the quality of the records in the schools and the consistency with which these records are maintained across all schools in each country, the measurement error may vary across research groups and thus affect the impact estimates. This is a particular concern if we think that SDPP might have induced schools to keep track of records differently or given them an incentive to report students as transfers rather than dropouts. Thus, this measure is less preferable than the first. However, we find no impacts of the intervention on this alternative measure of between-grade dropout, consistent with our findings for the main measure of between-grade dropout.

*Table F.1. Impact of the SDPP Program at endline on alternative measures of global dropout (SY 2013 and SY 2014)*

| Outcome                          | SDPP group    | Control group | Impact | p-value |
|----------------------------------|---------------|---------------|--------|---------|
| Global dropout rate <sup>a</sup> | 17.8          | 20.9          | -3.2   | 0.12    |
| Global dropout rate <sup>b</sup> | 18.8          | 22.0          | -3.2   | 0.12    |
| <b>Sample size</b>               |               |               |        |         |
| <b>Students</b>                  | <b>14,045</b> | <b>14,458</b> |        |         |
| <b>Schools</b>                   | <b>97</b>     | <b>94</b>     |        |         |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools, and cohort fixed effects.

<sup>a</sup> Global dropout rate includes within-year dropout measures for 2012 4th-grade and 2012 5th-grade cohorts, and between-year dropout measures for 2013 4th grade and 2014 4th grade cohorts. Within-grade dropout is defined by whether the student attended the last three months of the school year. Between-grade dropout is calculated across academic years and is expressed as whether a student enrolled in 4th grade is enrolled again at the beginning of SY 2015.

<sup>b</sup> Global dropout rate includes within-year dropout measures for 2012 4th-grade and 2012 5th-grade cohorts, and between-year dropout measures for 2013 4th-grade and 2014 4th-grade cohorts. Within-grade dropout is defined by whether a student who was enrolled in school at the beginning of the school year and exposed to the intervention for at least one year is still enrolled at the end of his/her 6th grade year. A student was considered to be a within-grade dropout if the student missed any of the three 3rd trimester exams. A student is considered to be a between-grade dropout if he/she was not enrolled in the next school year and did not transfer out of the school (normally a student who has transferred out of school is considered to be a dropout).

**Between-grade dropout.** We also calculated between-grade dropout separately for the cohorts it applied to (as we did in the primary global dropout) to assess the effect this measure played in global dropout (Table F.2). We also calculated between-grade dropout that considers a student to

be a between-grade dropout if he/she was not enrolled in the next school year and did not transfer out of the school. No impacts were found for either of these measures.

**Within-grade dropout.** As with between-grade dropout, we separately calculated within-grade dropout using the same definition as in the primary global dropout measure. We calculated within-grade dropout in two alternative ways: (1) a student was considered to be a within-grade dropout if he/she missed all three of the 3rd trimester exams; and (2) a student was considered to be a dropout if he/she did not attend in the last three months of the school year. There were no significant impacts for any of these three within-grade measures (Table F.2).

*Table F.2. Impact of the SDPP Program at endline on alternative measures of dropout (SY 2013 and SY 2014)*

| Outcome                                 | SDPP group    | Control group | Impact | p-value |
|---|---------------|---------------|--------|---------|
| Between-grade dropout rate <sup>a</sup> | 10.7          | 11.6          | -0.9   | 0.13    |
| Within-grade dropout rate <sup>b</sup>  | 17.7          | 16.9          | 0.8    | 0.48    |
| Within-grade dropout rate <sup>c</sup>  | 17.3          | 16.8          | 0.6    | 0.62    |
| Within-grade dropout rate <sup>d</sup>  | 23.1          | 24.9          | -1.8   | 0.51    |
| <b>Sample size</b>                      |               |               |        |         |
| <b>Students</b>                         | <b>14,116</b> | <b>14,538</b> |        |         |
| <b>Schools</b>                          | <b>97</b>     | <b>94</b>     |        |         |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools, and cohort fixed effects.

<sup>a</sup> In this measure, a student is considered to be a dropout if s/he was not enrolled in the next school year and did not transfer out of the school. This measure is calculated only for the SY 2012, SY 2013, and SY 2014 4th-grade cohorts.

<sup>b</sup> In this measure, a student is considered to be a dropout if s/he missed any of the 3rd trimester exams. This measure is calculated for SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

<sup>c</sup> In this measure, a student is considered to be a dropout if s/he missed all of the 3rd trimester exams. This measure is calculated for SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

<sup>d</sup> In this measure, a student is considered to be a dropout if s/he did not attend in the last three months of the school year. This measure is calculated for SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

**Progression in school.** In Section VI.D of *Volume 1: Main Findings*, we examine progression in school as an additional outcome in the dropout domain. This analysis examines whether students move forward in the educational cycle by being promoted out of the current grade and into the next grade or higher.

A student is considered to have progressed if he/she enrolls in a higher grade than the one attended in the previous school year. Grade progression differs from between-grade dropout in that a student who repeats a grade would not be considered to have progressed, but would not be counted as a between-grade dropout. We define an SY 2012 4th-grade cohort student and an SY 2013 4th-grade cohort student to have progressed in school if he/she progressed to 6th grade or higher in SY 2014 for SY 2012 4th-grade students and SY 2015 for SY 2013 4th-grade students. We define an SY 2014 4th-grade student to have progressed in school if he/she progressed to 6th grade or higher in

SY 2015. As described in Section VI.D of the main report, SDPP did not have an impact on grade progression (Table F.3).

We also measured the idea of grade advancement in two additional ways. A student is considered to have progressed on schedule if he/she enrolled in the next grade, but not higher, for each subsequent school year. This measure includes only the SY 2012, SY 2013, and SY 2014 4th-grade students. The second additional measure, promotion to the 7th grade, considers a student to have been promoted if his/her school record indicated that he/she completed 6th grade and was promoted to the 7th grade. We were not actually able to witness whether the student enrolled in 7th grade because 6th grade is the final target grade and students who subsequently enrolled in 7th grade frequently had to change schools. Contrary to grade progression, SDPP did have a marginally significant impact on progressing on schedule.

*Table F.3. Impact of the SDPP Program at endline on progression in school (SY 2013 and SY 2014) (percentage)*

| <b>Outcome</b>          | <b>SDPP group</b> | <b>Control group</b> | <b>Impact</b> | <b>p-value</b> |
|-------------------------|-------------------|----------------------|---------------|----------------|
| Progressing on schedule | 79.7              | 77.7                 | 2.0*          | 0.08           |
| Promoted to 7th grade   | 75.1              | 73.8                 | 1.3           | 0.11           |
| <b>Sample size</b>      |                   |                      |               |                |
| <b>Students</b>         | <b>10,894</b>     | <b>10,873</b>        |               |                |
| <b>Schools</b>          | <b>97</b>         | <b>94</b>            |               |                |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis of grade progression includes SY 2012 4th-grade, SY 2013 4th-grade, and SY 2014 4th-grade students. The analysis of progressing on schedule is based on the SY 2012 4th-grade, the SY 2013 4th-grade, and the SY 2014 4th-grade students. The analysis of grade promotion is based on the SY 2012 4th- and 5th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

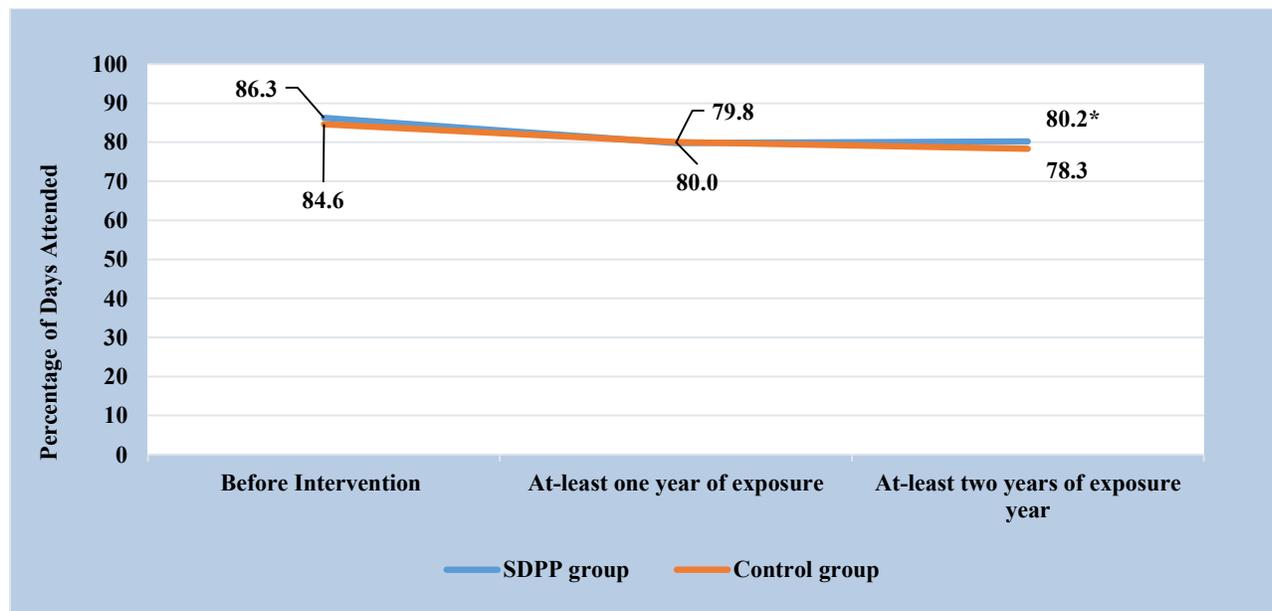
## APPENDIX G. EXPOSURE ANALYSIS

The cohorts of 4th graders in Timor-Leste for SYs 2012 and 2013 were exposed to the SDPP Program for more than one year as they continued to be in target grades after their initial year of exposure. In this appendix, we examine how the impacts of SDPP evolve with additional exposure to the intervention. We focus on attendance and dropout, the longer-term primary outcomes identified by the theory of change most likely to exhibit different impact patterns with longer exposure to the intervention.

### A. Attendance and exposure

Attendance rates for the two cohorts included in this analysis were similar in the baseline year (before SDPP group students were exposed to the program) and year 1 (when SDPP group students had been exposed to the program for one full school year). The differences in the SDPP and control group attendance rates were not statistically significant at these two points in time (Figure G.1). However, for year 2 (when SDPP group students had been exposed to the program for two full school years), the attendance rate for the SDPP group students in these two cohorts was 80.2 percent compared to 78.3 percent for the control group students. This difference is marginally significant. This finding provides some evidence that the impact of SDPP on attendance is stronger with more exposure to the intervention.

*Figure G.1. SDPP's impact on daily attendance with changing levels of exposure to the intervention*



Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 and SY 2013 and 2014 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools, and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

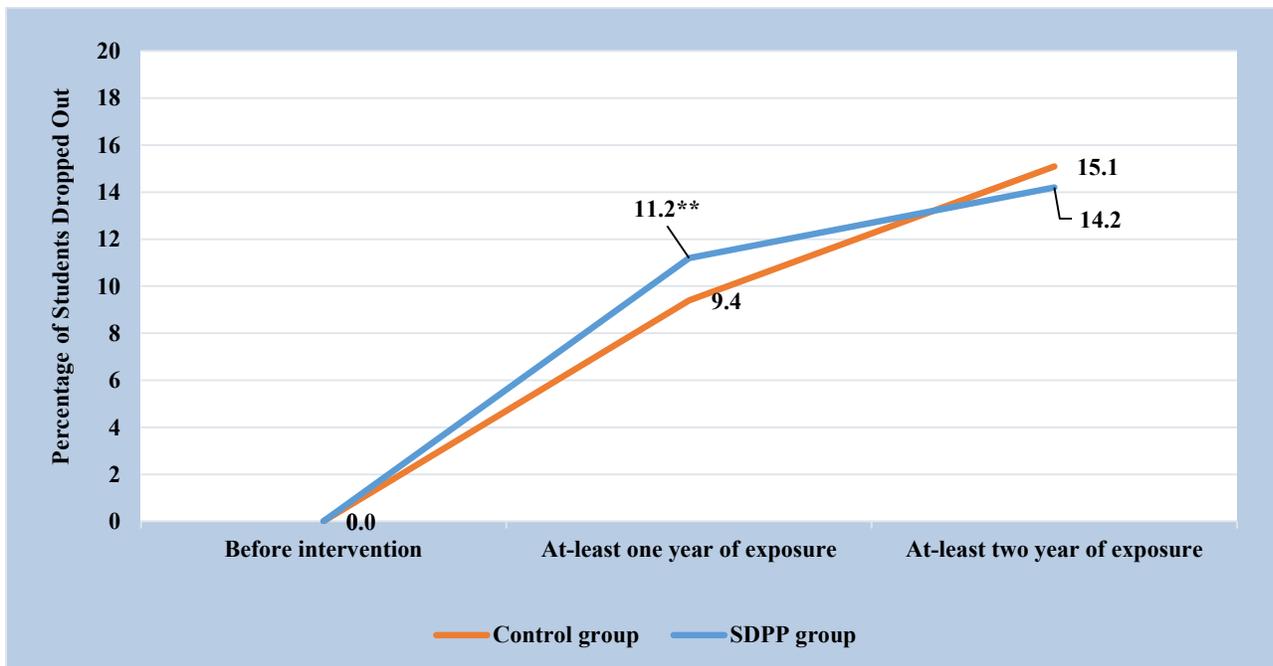
## B. Dropout and exposure

As discussed above, the two cohorts that could have been exposed to the intervention for more than one year were in 4th grade in SYs 2012 and 2013. As with the attendance analysis, we examine dropout rates for these two cohorts in the year before SDPP group students were exposed to the program, the first full school year SDPP group students were exposed to the program, and the second full school year SDPP group students were exposed to the program.

To be included in this analysis, all students had to be enrolled at the beginning of year 1, the first full school year SDPP group students were exposed to the program. As a result, these students could not have dropped out during the baseline year and, by definition, the dropout rates in the baseline year are zero for students in both the SDPP and the control groups.

After year 1 (when SDPP group students had been exposed to the program for one full school year), dropout rate for students in the SDPP group is 11.2 percent compared to 9.4 percent in the control schools. The difference is statistically significant (Figure G.2). This unfavorable impact could be the result of better recordkeeping in the SDPP schools. Other reasons the SDPP Program could have induced higher dropout rates after one year of exposure are unclear.

Figure G.2. SDPP's impact on dropout rates with changing levels of exposure to the intervention



Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 and SY 2013 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools, and cohort fixed effects.

After year 2 (when SDPP group students had been exposed to the program for two full school years), the dropout rate in SDPP schools (14.2 percent) falls below the dropout rate in the control schools (15.1 percent), although the difference is not statistically significant (Figure G.2). There is no statistically significant impact on dropout after two years of exposure to the SDPP Program, but the trend over time might suggest that the impact becomes more favorable with additional exposure to the program. Additional research would be required to establish whether this favorable trend translates into significant impacts with exposure periods greater than two years.

## APPENDIX H. SUPPLEMENTAL TABLES

In this section, we present supplemental tables to the tables and figures presented in *Volume 1: Main Findings*.

We first present expanded versions of tables V.1 and V.2, showing additional characteristics of the sample of schools, teachers, and students at baseline, followed by a table of baseline characteristics of school administrators (school directors and deputy directors) (Tables H.1 through H.4). We see that SDPP and control groups were balanced overall at baseline, and any differences were no more than would be expected by chance.

*Table H.1. Average school characteristics prior to intervention (SY 2012) (percentage of schools unless otherwise indicated)*

| Outcome  | SDPP group | Control group |
|--|------------|---------------|
| Offer grades 1 through 6                             | 100.0      | 100.0         |
| Enrollment (mean number of students)                 |            |               |
| Grade 4 (target grade)                               | 40.5       | 41.5          |
| Grade 5 (target grade)                               | 33.7*      | 39.7          |
| Grade 6 (target grade)                               | 29.8       | 33.1          |
| Grades 1 through 6                                   | 250.8      | 260.3         |
| Number of teachers                                   | 9.3        | 10.3          |
| Classes per grade                                    |            |               |
| Grade 4 (target grade)                               | 1.2        | 1.3           |
| Grade 5 (target grade)                               | 1.1        | 1.2           |
| Grade 6 (target grade)                               | 1.1        | 1.1           |
| Class size (number of students)                      |            |               |
| Grade 4 (target grade)                               | 34.0       | 32.0          |
| Grade 5 (target grade)                               | 29.2       | 31.5          |
| Grade 6 (target grade)                               | 25.5       | 28.0          |
| Attendance rate at time of headcount (% of students) |            |               |
| Grade 4 (target grade)                               | 79.7       | 78.8          |
| Grade 5 (target grade)                               | 81.6       | 79.9          |
| Grade 6 (target grade)                               | 83.4       | 82.9          |
| Grades 4, 5, and 6 teacher attendance rate           |            |               |
| January  | 95.9       | 93.8          |
| February   | 95.0       | 94.1          |
| March  | 94.8       | 94.9          |
| Instruction in two or more shifts                    | 49.5       | 50.0          |
| Active external school programs                      |            |               |
| No other active programs                             | 18.6       | 22.3          |
| School feeding                                       | 76.3       | 72.3          |
| Health or hygiene                                    | 21.6       | 20.2          |
| Other active programs                                | 26.8       | 20.2          |
| School accessible by all types of vehicles           | 77.3       | 72.3          |
| <b>Sample size</b>                                   |            |               |
| <b>Schools</b>                                       | <b>97</b>  | <b>94</b>     |

Source: SDPP baseline school questionnaire, May 2012.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Table V.1 for definition of external school programs.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

Table H.2. At-risk student demographic characteristics prior to intervention, by inclusion in at-risk student questionnaire (Grades 3-5, SY 2012) (percentages of students unless otherwise indicated)

|  | SDPP group | Control group |
|--|------------|---------------|
| <b>At-risk students (full sample)</b>                          |            |               |
| Female   | 44.2       | 43.7          |
| Over-age for grade   | 13.4       | 12.4          |
| School dropout risk factors, 2012 school year                  |            |               |
| Daily attendance rate  |            |               |
| 1st trimester, SY 2012   | 90.7       | 90.9          |
| Academic Performance on 1st Trimester Exam Scores (range 1-10) |            |               |
| Math   | 5.3        | 5.3           |
| Portuguese   | 5.6        | 5.6           |
| Tetun  | 5.9        | 5.9           |
| Behavior Rated Good or Better during 1st Trimester             | 60.1       | 60.6          |
| School dropout risk indicator scores                           |            |               |
| Attendance   | 1.10       | 1.13          |
| Academic performance   | 1.57       | 1.63          |
| Behavior   | 0.72       | 0.70          |
| <b>At-risk students (survey subsample)</b>                     |            |               |
| Female   | 43.5       | 43.9          |
| Over-age for grade   | 14.5       | 15.0          |
| School dropout risk factors, 2012 school year                  |            |               |
| Daily attendance rate  |            |               |
| 1st trimester, SY 2012   | 91.1       | 92.0          |
| Academic Performance on 1st Trimester Exam Scores (range 1-10) |            |               |
| Math   | 5.3        | 5.2           |
| Portuguese   | 5.5        | 5.5           |
| Tetun  | 5.9        | 5.8           |
| Behavior Rated Good or Better during 1st Trimester             |            |               |
| School dropout risk indicator scores                           |            |               |
| Attendance   | 1.09       | 1.07          |
| Academic performance   | 1.61**     | 1.69          |
| Behavior   | 0.72       | 0.73          |
| <b>Sample size (full sample)</b>                               |            |               |
| Schools  | 97         | 94            |
| Students   | 5,391      | 5,503         |
| <b>Sample size (survey subsample)</b>                          |            |               |
| Schools  | 97         | 94            |
| Students   | 2,827      | 2,740         |

Source: SDPP baseline school records data collection and at-risk student questionnaire, May 2012 and 2013.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Table V.2 in the main report for definition of over-age for grade, daily attendance, and academic performance and behavior, and Section A for at-risk component score construction.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between SDPP and control group distributions is statistically significant at the .01/.05/.10 level.

Table H.3. Average teacher characteristics for math, language, and homeroom teachers prior to intervention (Grades 4, 5, and 6, SY 2012) (percentage of teachers unless indicated otherwise)

|  | SDPP group | Control group |
|--|------------|---------------|
| <b>Demographic and employment characteristics</b>                            |            |               |
| Age (years)  | 42.4       | 42.0          |
| Female   | 30.9       | 34.4          |
| Subject of 4th, 5th, and 6th grade instruction                               |            |               |
| Math   | 47.5       | 40.4          |
| Tetun  | 48.9       | 43.2          |
| Portuguese   | 49.6       | 40.4          |
| Homeroom   | 80.1*      | 72.4          |
| Teaching status  |            |               |
| Full time  | 88.7       | 87.1          |
| Contract   | 0.4        | 1.4           |
| Volunteer  | 11.0       | 11.5          |
| <b>Education and experience characteristics</b>                              | 88.9       | 91.0          |
| Highest level of education   |            |               |
| University degree or higher  | 1.1        | 2.2           |
| Bacharelato  | 20.9       | 20.4          |
| Teacher training institute/college (SPG)                                     | 19.9       | 17.2          |
| Secondary school   | 55.7       | 55.6          |
| Did not complete secondary school  | 2.5        | 4.7           |
| Teaching experience overall  |            |               |
| Less than 10 years   | 50.5       | 52.6          |
| 10 years to less than 20 years   | 26.4       | 25.2          |
| 20 years to less than 30 years   | 14.1       | 15.6          |
| 30 years or more   | 9.0        | 6.7           |
| Teaching experience at current school  |            |               |
| Less than 10 years   | 69.8       | 69.4          |
| 10 years to less than 20 years   | 28.5       | 28.8          |
| 20 years to less than 30 years   | 1.8        | 1.8           |
| 30 years or more   | 0.0        | 0.0           |
| Formal teaching certificate  | 83.3       | 84.2          |
| Received training related to at-risk students                                |            |               |
| Ever   | 45.2       | 39.4          |
| Less than 3 years ago  | 30.7       | 30.8          |
| Less than 2 years ago  | 26.8       | 27.2          |
| Less than 1 year ago   | 15.4       | 16.8          |
| <b>Knowledge, attitudes, and behavior toward at-risk students</b>            |            |               |
| Identified 6 or more of 8 risk factors for school dropout                    | 13.1***    | 23.7          |
| Teacher's sense of responsibility for at-risk students scale (range: 1 to 4) | 1.90       | 1.93          |
| Teacher's sense of self efficacy scale (range: 1 to 5)                       | 4.15       | 4.15          |
| Teacher dropout prevention practice scale (range: 1 to 8)                    | 7.76       | 7.80          |
| <b>Sample size</b>   |            |               |
| <b>Schools</b>   | <b>93</b>  | <b>88</b>     |
| <b>Teachers</b>  | <b>282</b> | <b>279</b>    |

Source: SDPP baseline school records data collection and at-risk student questionnaire, May 2012 and 2013.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. Analysis accounts for clustering of teachers within schools. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Table VI.1 of the main report for definition of teacher's sense of responsibility for at-risk students scale and teacher's sense of self efficacy scale, and Section A for definition of risk factors for school dropout.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between SDPP and control group distributions is statistically significant at the .01/.05/.10 level.

Table H.4. Average school administrator characteristics for math, language, and homeroom teachers prior to intervention (SY 2012) (percentage of teachers unless indicated otherwise)

|   | SDPP group | Control group |
|---|------------|---------------|
| <b>Demographic and employment characteristics</b>                 |            |               |
| Age (years)   | 45.1       | 46.0          |
| Female  | 7.7        | 5.4           |
| Employment status   |            |               |
| Full time   | 100.0      | 98.9          |
| Contract  | 0.0        | 0.0           |
| Volunteer   | 0.0        | 1.1           |
| <b>Education and experience characteristics</b>                   |            |               |
| Highest level of education  |            |               |
| University degree or higher                                       | 1.1        | 1.1           |
| Bacharelato   | 38.5       | 41.3          |
| Teacher training institute/college (SPG)                          | 24.2       | 20.7          |
| Secondary school  | 36.3       | 35.9          |
| Did not complete secondary school                                 | 0.0        | 1.1           |
| Combined teaching and administrative experience overall           |            |               |
| Less than 10 years  | 7.8        | 7.9           |
| 10 years to less than 20 years                                    | 27.8       | 31.5          |
| 20 years to less than 30 years                                    | 37.8       | 29.2          |
| 30 years or more  | 26.7       | 31.5          |
| Teaching experience overall                                       |            |               |
| Less than 10 years  | 22.1       | 22.1          |
| 10 years to less than 20 years                                    | 25.1       | 27.2          |
| 20 years to less than 30 years                                    | 29.2       | 28.2          |
| 30 years or more  | 23.6       | 22.6          |
| Teaching experience at current school                             |            |               |
| Less than 10 years  | 31.9       | 37.0          |
| 10 years to less than 20 years                                    | 58.2       | 60.9          |
| 20 years to less than 30 years                                    | 8.8        | 1.1           |
| 30 years or more  | 1.1        | 1.1           |
| Additional formal teaching certificate                            | 90.1       | 92.4          |
| Received training related to at-risk students                     |            |               |
| Ever  | 53.3       | 48.9          |
| Less than 3 years ago   | 33.3       | 34.8          |
| Less than 2 years ago   | 27.8       | 29.3          |
| Less than 1 year ago  | 18.9       | 15.2          |
| <b>Knowledge, attitudes, and behavior toward at-risk students</b> |            |               |
| Identified 6 or more of 8 risk factors for school dropout         | 17.6       | 20.7          |
| <b>Sample size</b>  |            |               |
| Schools   | 67         | 71            |
| Administrators  | 91         | 92            |

Source: SDPP baseline school records data collection and at-risk student questionnaire, May 2012 and 2013.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. Analysis accounts for clustering of teachers within schools. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Section A for definition of risk factors for school dropout.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between SDPP and control group distributions is statistically significant at the .01/.05/.10 level.

Next, we provide more details on the impacts of SDPP on primary outcomes that were presented in *Volume 1: Main Findings*. For the full sample and the at-risk student sample, we provide tables that show the means for the SDPP and control group, impact, *p*-value, and sample size (Table H.5, Table H.6). We also provide details for the impact of SDPP on the primary outcomes by cohort (Table H.7). Finally, we present tables on additional measures and subgroup findings that were displayed in figures in the main report (Tables H.8–H.13).

*Table H.5. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline (SY 2013 and SY 2014)*

|   | SDPP group    | Control group | Impact  | <i>p</i> -value |
|---|---------------|---------------|---------|-----------------|
| <b>Teacher Outcomes</b>   |               |               |         |                 |
| Teacher dropout prevention practice scale (range: 1 to 8)                     | 7.87          | 7.72          | 0.15*** | 0.00            |
| <b>At-Risk student attitudes toward school</b>                                |               |               |         |                 |
| Emotional attitudes   | 85.0          | 85.9          | -0.9    | 0.41            |
| Cognitive attitudes   | 71.3          | 71.7          | -0.4    | 0.57            |
| Behavioral attitudes  | 79.5          | 76.3          | 3.3***  | 0.00            |
| <b>School engagement</b>  |               |               |         |                 |
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) | 82.0          | 80.3          | 1.7**   | 0.04            |
| <b>School dropout</b>   |               |               |         |                 |
| Global dropout rate   | 16.3          | 15.5          | 0.8     | 0.47            |
| <b>Sample Size</b>  |               |               |         |                 |
| <b>Schools</b>  | <b>97</b>     | <b>94</b>     |         |                 |
| <b>Students</b>   | <b>14,045</b> | <b>14,458</b> |         |                 |
| <b>Teachers</b>   | <b>412</b>    | <b>406</b>    |         |                 |

Sources: SDPP baseline and follow-up student records and school questionnaire, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up at-risk student questionnaire, May 2012 and May 2013; baseline and follow-up teacher self-administered questionnaires, May 2012, May 2013, and September 2014.

Note: Impact for at-risk student attitudes adjusted for multiple comparisons using the Benjamini-Hochberg method. Differences between SDPP and control group means were tested using two-tailed *t*-tests unless otherwise indicated. The analysis accounts for clustering of students and teachers within schools. Sample sizes for some characteristics may be smaller due to missing responses.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Table H.6. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline, by at-risk status (SY 2012, SY 2013, and SY 2014)

|   | At Risk of School Dropout at Baseline |               |        |         | Not At Risk of School Dropout at Baseline |               |        |         |
|---|---------------------------------------|---------------|--------|---------|---|---------------|--------|---------|
|   | SDPP group                            | Control group | Impact | p-value | SDPP group                                | Control group | Impact | p-value |
| <b>At-Risk student attitudes toward school</b>                                |                                       |               |        |         |   |               |        |         |
| Emotional attitudes   | 85.0                                  | 85.9          | -0.9   | 0.41    | n.a.                                      | n.a.          | n.a.   | n.a.    |
| Cognitive attitudes   | 71.3                                  | 71.7          | -0.4   | 0.57    | n.a.                                      | n.a.          | n.a.   | n.a.    |
| Behavioral attitudes  | 79.5                                  | 76.3          | 3.3*** | 0.00    | n.a.                                      | n.a.          | n.a.   | n.a.    |
| <b>School engagement</b>  |                                       |               |        |         |   |               |        |         |
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) | 78.9                                  | 76.6          | 2.3*** | 0.01    | 84.3                                      | 82.9          | 1.4    | 0.12    |
| <b>School dropout</b>   |                                       |               |        |         |   |               |        |         |
| Global dropout rate   | 17.7                                  | 17.7          | 0.0    | 0.97    | 15.3                                      | 14.0          | 1.3    | 0.34    |
| <b>Sample Size</b>  |                                       |               |        |         |   |               |        |         |
| <b>Schools</b>  | <b>97</b>                             | <b>94</b>     |        |         | <b>97</b>                                 | <b>94</b>     |        |         |
| <b>Students</b>   | <b>6,015</b>                          | <b>5,950</b>  |        |         | <b>8,030</b>                              | <b>8,508</b>  |        |         |

Sources: SDPP baseline and follow-up school records data collections, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up at-risk student questionnaire, May 2012 and May 2013.

Note: Impact for at-risk student attitudes adjusted for multiple comparisons using the Benjamini-Hochberg method.

Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. The analysis accounts for clustering of students within schools. Sample sizes for some characteristics may be smaller due to missing responses.

n.a. = not applicable.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Table H.7. Impacts on the primary measures of program effectiveness of the Timor-Leste SDPP Program at endline, by cohort (SY 2013 and SY 2014)

|   | SDPP group | Control group | Impact | p-value |
|---|------------|---------------|--------|---------|
| <b>SY 2012 4th grade</b>  |            |               |        |         |
| <b>At-risk student attitudes toward school</b>                                |            |               |        |         |
| Emotional attitudes   | 84.7       | 85.1          | -0.4   | 0.77    |
| Cognitive attitudes   | 71.4       | 72.0          | -0.6   | 0.54    |
| Behavioral attitudes  | 82.5       | 79.9          | 2.7*   | 0.02    |
| <b>School engagement</b>  |            |               |        |         |
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) | 78.6       | 77.2          | 1.5    | 0.23    |
| <b>School dropout</b>   |            |               |        |         |
| Global dropout rate   | 17.4       | 18.2          | -0.8   | 0.34    |
| <b>SY 2012 5th grade</b>  |            |               |        |         |
| <b>At-risk student attitudes toward school</b>                                |            |               |        |         |
| Emotional attitudes   | 86.9       | 87.6          | -0.7   | 0.60    |
| Cognitive attitudes   | 72.5       | 71.5          | 1.0    | 0.28    |
| Behavioral attitudes  | 83.7       | 80.6          | 3.1*   | 0.03    |
| <b>School engagement</b>  |            |               |        |         |
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) | 79.4       | 77.7          | 1.7    | 0.32    |
| <b>School dropout</b>   |            |               |        |         |
| Global dropout rate   | 30.8       | 25.1          | 5.6    | 0.21    |
| <b>SY 2013 4th grade</b>  |            |               |        |         |
| <b>At-risk student attitudes toward school</b>                                |            |               |        |         |
| Emotional attitudes   | 83.5       | 84.7          | -1.2   | 0.43    |
| Cognitive attitudes   | 70.9       | 70.9          | 0.0    | 1.00    |
| Behavioral attitudes  | 78.2       | 74.3          | 3.8**  | 0.01    |
| <b>School engagement</b>  |            |               |        |         |
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) | 81.9       | 79.6          | 2.3**  | 0.04    |
| <b>School dropout</b>   |            |               |        |         |
| Global dropout rate   | 10.9       | 12.1          | -1.1   | 0.19    |
| <b>SY 2014 4th grade</b>  |            |               |        |         |
| <b>At-risk student attitudes toward school</b>                                |            |               |        |         |
| Emotional attitudes   | 85.1       | 86.1          | -1.0   | 0.54    |
| Cognitive attitudes   | 70.7       | 72.6          | -1.9*  | 0.06    |
| Behavioral attitudes  | 75.1       | 70.9          | 4.2*   | 0.02    |
| <b>School engagement</b>  |            |               |        |         |
| Daily attendance rate (January 2013–October 2013; January 2014–November 2014) | 89.6       | 88.0          | 1.6    | 0.20    |
| <b>School dropout</b>   |            |               |        |         |
| Global dropout rate   | 3.3        | 4.4           | -1.0   | 0.13    |
| <b>Sample Size (SY 2012 4th grade)</b>  |            |               |        |         |
| Schools   | 97         | 93            |        |         |
| Students  | 3,853      | 3,808         |        |         |
| <b>Sample Size (SY 2012 5th grade)</b>  |            |               |        |         |
| Schools   | 97         | 94            |        |         |
| Students  | 3,222      | 3,675         |        |         |
| <b>Sample Size (SY 2013 4th grade)</b>  |            |               |        |         |
| Schools   | 97         | 93            |        |         |
| Students  | 4,199      | 4,134         |        |         |
| <b>Sample Size (SY 2014 4th grade)</b>  |            |               |        |         |
| Schools   | 97         | 93            |        |         |
| Students  | 2,771      | 2,841         |        |         |

Sources: SDPP baseline and follow-up school records data collections, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up at-risk student questionnaire, May 2012 and May 2013.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. The analysis accounts for clustering of students within schools. Sample sizes for some characteristics may be smaller due to missing responses.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Table H.8. SDPP's impacts on the primary measure of program effectiveness for teacher outcomes, by subgroup (SY 2013 and SY 2014)

|  | Teacher dropout prevention practice scale |               |         | School Sample Size |               | Teacher sample size |            |
|--|---|---------------|---------|--------------------|---------------|---------------------|------------|
|  | SDPP group                                | Control group | Impact  | SDPP group         | Control group | Impact              | SDPP group |
| <b>Teacher gender</b>                                |   |               |         |                    |               |                     |            |
| Female   | 7.91                                      | 7.76          | 0.15    | 65                 | 58            | 129                 | 136        |
| Male   | 7.84                                      | 7.69          | 0.15*** | 92                 | 87            | 283                 | 270        |
| <i>Difference in subgroup impacts is significant</i> | No  |               |         |                    |               |                     |            |
| <b>School percentage of at-risk students</b>         |   |               |         |                    |               |                     |            |
| Low  | 7.88                                      | 7.70          | 0.18*** | 62                 | 64            | 251                 | 277        |
| High   | 7.83                                      | 7.74          | 0.10    | 35                 | 29            | 161                 | 129        |
| <i>Difference in subgroup impacts is significant</i> | No  |               |         |                    |               |                     |            |
| <b>School is remote</b>                              |   |               |         |                    |               |                     |            |
| No   | 7.82                                      | 7.64          | 0.18*   | 22                 | 25            | 80                  | 86         |
| Yes  | 7.87                                      | 7.73          | 0.14**  | 75                 | 68            | 332                 | 320        |
| <i>Difference in subgroup impacts is significant</i> | No  |               |         |                    |               |                     |            |
| <b>Teaching status</b>                               |   |               |         |                    |               |                     |            |
| Full-time  | 7.88                                      | 7.74          | 0.14*** | 94                 | 89            | 316                 | 322        |
| Not full-time  | 7.77                                      | 7.59          | 0.18    | 54                 | 49            | 96                  | 84         |
| <i>Difference in subgroup impacts is significant</i> | No  |               |         |                    |               |                     |            |

Sources: SDPP baseline and follow-up teacher self-administered questionnaires and school records data collection, May 2012, May 2013, and September 2014.

Note: The analysis is based on 4th-, 5th-, and 6th-grade homeroom, math, and language teachers during SY 2013 and SY 2014.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of teachers within schools and school-year effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Table H.9. SDPP's impact on additional attitudinal outcomes of at-risk students (SY 2013 and SY 2014)

| Outcome (% of items with which student agreed) | SDPP group   | Control group | Impact |
|--|--------------|---------------|--------|
| Student perception of teacher support          | 80.7         | 79.7          | 0.9    |
| Student perception of parental support         | 86.4         | 86.6          | -0.2   |
| <b>Sample size</b>                             |              |               |        |
| <b>Schools</b>                                 | <b>97</b>    | <b>94</b>     |        |
| <b>Students</b>                                | <b>3,226</b> | <b>3,006</b>  |        |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Table H.10. SDPP's impacts on the primary at-risk student attitude measures, by subgroup (SY 2013 and SY 2014)

|  | Emotional attitudes toward school |               |        | Cognitive attitudes toward school |               |        | Behavioral attitudes toward school |               |        |
|--|-----------------------------------|---------------|--------|-----------------------------------|---------------|--------|------------------------------------|---------------|--------|
|  | SDPP group                        | Control group | Impact | SDPP group                        | Control group | Impact | SDPP group                         | Control group | Impact |
| <b>Student gender</b>                                |                                   |               |        |                                   |               |        |                                    |               |        |
| Female   | 85.8                              | 86.3          | -0.5   | 71.4                              | 71.7          | -0.3   | 79.1                               | 75.7          | 3.4*** |
| Male   | 84.4                              | 85.7          | -1.2   | 71.5                              | 72.0          | -0.5   | 80.4                               | 77.3          | 3.1*** |
| <i>Difference in subgroup impacts is significant</i> | No                                |               |        | No                                |               |        | No                                 |               |        |
| <b>Student is over-age for grade</b>                 |                                   |               |        |                                   |               |        |                                    |               |        |
| Yes  | 87.0                              | 86.5          | 0.5    | 71.8                              | 72.1          | -0.3   | 80.4                               | 73.5          | 6.8*** |
| No   | 84.7                              | 85.6          | -0.9   | 71.3                              | 71.6          | -0.3   | 79.9                               | 76.9          | 3.0*** |
| <i>Difference in subgroup impacts is significant</i> | No                                |               |        | No                                |               |        | Yes††                              |               |        |
| <b>School percentage of at-risk students</b>         |                                   |               |        |                                   |               |        |                                    |               |        |
| Low  | 85.0                              | 85.6          | -0.5   | 71.0                              | 71.9          | -1.0   | 79.1                               | 77.3          | 1.8    |
| High   | 85.2                              | 86.7          | -1.6   | 72.2                              | 71.7          | 0.6    | 80.8                               | 74.9          | 5.9*** |
| <i>Difference in subgroup impacts is significant</i> | No                                |               |        | No                                |               |        | Yes†                               |               |        |
| <b>School is remote</b>                              |                                   |               |        |                                   |               |        |                                    |               |        |
| No   | 85.4                              | 88.5          | -3.1*  | 71.6                              | 73.7          | -2.1   | 79.5                               | 76.0          | 3.5*   |
| Yes  | 85.0                              | 85.2          | -0.2   | 71.4                              | 71.3          | 0.1    | 79.8                               | 76.7          | 3.2*** |
| <i>Difference in subgroup impacts is significant</i> | No                                |               |        | No                                |               |        | No                                 |               |        |
| <b>Sample Size</b>                                   |                                   |               |        |                                   |               |        |                                    |               |        |
| <b>Schools</b>                                       | <b>97</b>                         | <b>94</b>     |        | <b>97</b>                         | <b>94</b>     |        | <b>97</b>                          | <b>94</b>     |        |
| <b>Students</b>                                      | <b>3,226</b>                      | <b>3,006</b>  |        | <b>3,224</b>                      | <b>3,006</b>  |        | <b>3,225</b>                       | <b>3,006</b>  |        |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015; baseline and follow-up student surveys, May 2013 and September 2014.

Note: The analysis is based on SY 2012 4th and 5th grade at-risk students, and SY 2013 and 2014 4th grade at-risk students. Sample sizes are 2,865 (female) and 3,367 (male), 598 (over-age) and 5,198 (not over-age), 2,223 (schools with high percentage of at-risk students) and 4,009 (schools with low percentage of at-risk students), and 1,339 (schools below median distance to district capital) and 4,893 (schools at or above median distance to district capital).

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects. Because these subgroup analyses are exploratory, statistical significance thresholds were not adjusted for multiple comparisons.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

*Table H.11. SDPP's impacts on additional engagement outcomes (SY 2013 and SY 2014)*

| <b>Outcome (range: 1 to 10)</b> | <b>SDPP group</b> | <b>Control group</b> | <b>Impact</b> |
|---------------------------------|-------------------|----------------------|---------------|
| Math score                      | 6.3               | 6.2                  | 0.1           |
| Portuguese score                | 6.6               | 6.5                  | 0.1           |
| Tetun score                     | 6.9               | 6.8                  | 0.0           |
| Behavior score                  | 7.4               | 7.5                  | -0.1          |
| <b>Sample size</b>              |                   |                      |               |
| <b>Schools</b>                  | <b>97</b>         | <b>93</b>            |               |
| <b>Students</b>                 | <b>11,803</b>     | <b>12,093</b>        |               |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students. The sample includes 13,645 students for the SDPP group (5,884 at risk and 6,233 not at risk) and 13,702 students for the control group (5,724 at risk and 6,681 not at risk).

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Table H.12. SDPP's impacts on the primary student engagement outcome (attendance) for students, by subgroup (SY 2013 and SY 2014)

|  | Daily attendance rate (January 2013 - November 2013; January 2014 - November 2014) <sup>a</sup> |               |        | School sample size |               | Student sample size |               |
|--|---|---------------|--------|--------------------|---------------|---------------------|---------------|
|  | SDPP group  | Control group | Impact | SDPP group         | Control group | SDPP group          | Control group |
| <b>Student gender</b>                                |   |               |        |                    |               |                     |               |
| Female   | 84.1  | 82.4          | 1.7**  | 97                 | 94            | 6,709               | 6,675         |
| Male   | 80.4  | 78.7          | 1.7**  | 97                 | 93            | 6,935               | 7,025         |
| <i>Difference in subgroup impacts is significant</i> | No  |               |        |                    |               |                     |               |
| <b>Student is over-age for grade</b>                 |   |               |        |                    |               |                     |               |
| Yes  | 70.5  | 68.3          | 2.3**  | 95                 | 93            | 1,602               | 1,421         |
| No   | 85.3  | 83.6          | 1.7**  | 97                 | 94            | 11,112              | 11,470        |
| <i>Difference in subgroup impacts is significant</i> | No  |               |        |                    |               |                     |               |
| <b>School percentage of at-risk students</b>         |   |               |        |                    |               |                     |               |
| Low  | 83.7  | 81.6          | 2.1**  | 62                 | 65            | 8,761               | 9,553         |
| High   | 79.3  | 78.2          | 1.1    | 35                 | 29            | 4,884               | 4,149         |
| <i>Difference in subgroup impacts is significant</i> | No  |               |        |                    |               |                     |               |
| <b>School is remote</b>                              |   |               |        |                    |               |                     |               |
| No   | 80.9  | 79.0          | 1.9    | 22                 | 26            | 2,228               | 2,988         |
| Yes  | 82.5  | 80.9          | 1.6*   | 75                 | 68            | 11,417              | 10,714        |
| <i>Difference in subgroup impacts is significant</i> | No  |               |        |                    |               |                     |               |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Table H.13. SDPP's impacts on school dropout, by subgroup (SY 2013 and SY 2014)

|  | School dropout |               |        | School sample size |               | Student sample size |               |
|--|----------------|---------------|--------|--------------------|---------------|---------------------|---------------|
|  | SDPP group     | Control group | Impact | SDPP group         | Control group | SDPP group          | Control group |
| <b>Student gender</b>                                |                |               |        |                    |               |                     |               |
| Female   | 14.2           | 13.6          | 0.6    | 97                 | 94            | 6,897               | 7,062         |
| Male   | 17.1           | 16.1          | 1.0    | 97                 | 94            | 7,147               | 7,394         |
| <i>Difference in subgroup impacts is significant</i> | No             |               |        |                    |               |                     |               |
| <b>Student is over-age for grade</b>                 |                |               |        |                    |               |                     |               |
| Yes  | 27.4           | 28.6          | -1.2   | 96                 | 94            | 1,611               | 1,445         |
| No   | 12.8           | 11.3          | 1.5    | 97                 | 94            | 11,470              | 12,109        |
| <i>Difference in subgroup impacts is significant</i> | No             |               |        |                    |               |                     |               |
| <b>School percentage of at-risk students</b>         |                |               |        |                    |               |                     |               |
| Low  | 14.0           | 14.6          | -0.7   | 62                 | 65            | 8,977               | 10,260        |
| High   | 19.0           | 15.1          | 3.9**  | 35                 | 29            | 5,068               | 4,198         |
| <i>Difference in subgroup impacts is significant</i> | Yes†           |               |        |                    |               |                     |               |
| <b>School is remote</b>                              |                |               |        |                    |               |                     |               |
| No   | 17.5           | 18.6          | -1.0   | 22                 | 26            | 2,288               | 3,074         |
| Yes  | 15.3           | 13.9          | 1.4    | 75                 | 68            | 11,757              | 11,384        |
| <i>Difference in subgroup impacts is significant</i> | No             |               |        |                    |               |                     |               |

Sources: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, September 2014, and January 2015.

Note: The analysis is based on SY 2012 4th- and 5th-grade students, and SY 2013 and 2014 4th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

## **APPENDIX I. SCHOOL-LEVEL TREND ANALYSIS**

Section VII of the main report presented aggregate trends in dropout rates based on grade-level enrollment and head count data. The within-grade and between-grade dropout measures were calculated using the number of students enrolled at the start of each school year and the number of students who took exams at the end of each school year. This appendix presents school trends in dropout rates using alternative school-level dropout measures. Additionally, the appendix presents detailed findings on school trends in enrollment and attendance using aggregate data collected through a school questionnaire and direct observation.

### **A. School-level enrollment and headcount data**

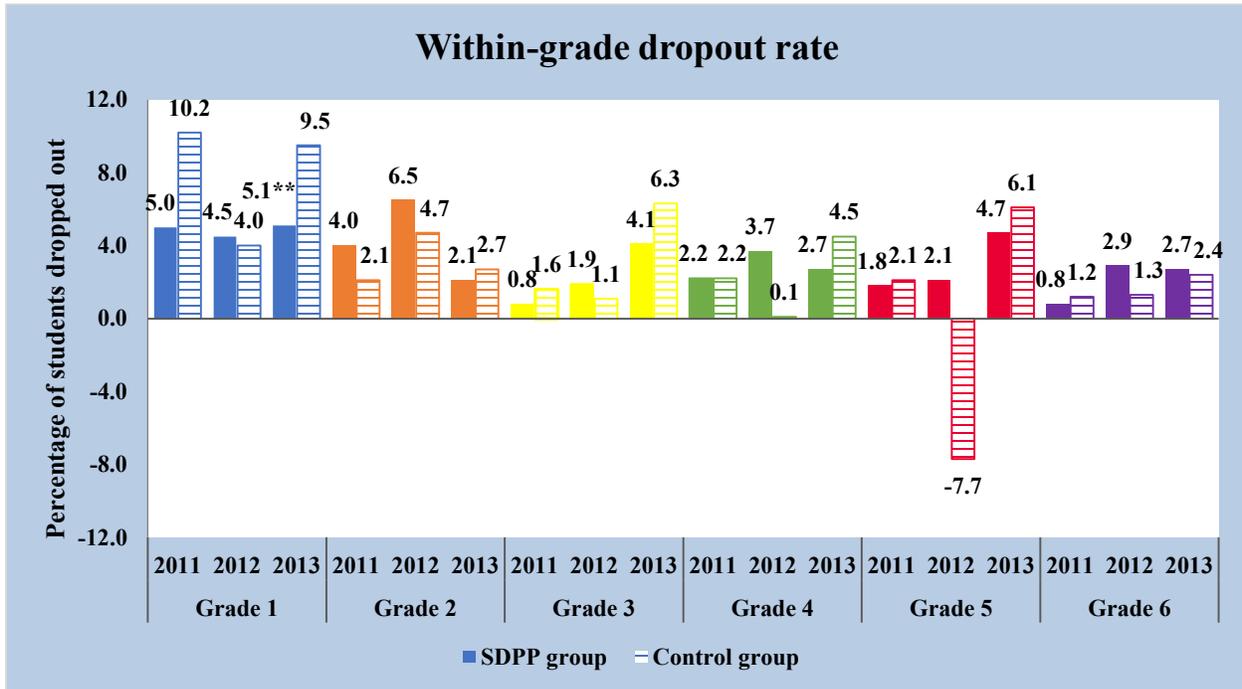
SDPP administered the school questionnaire during each data collection round to school administrators. The questionnaire collected information on start-of-year and end-of-year enrollment, a head count of the number of 4th-, 5th, and 6th-grade students present on the day of data collection, and the number of transfer students in and out of school for all grades in the primary cycle (grades 1 through 6).

### **B. School dropout rates**

The school-level trends in dropout rates described in Section VII of the main report uses aggregate dropout measures that did not distinguish between enrolled students, dropouts, transfers, repeaters, and newly enrolled students. Thus, the measures actually include students in all of these situations and are therefore sensitive to whether more students transferred in or repeated the grade than dropped out or transferred out. As part of the school questionnaire, SDPP collected counts of students who transferred in or out during each school year. Using these counts, an alternative measure of school-level dropout rate is calculated, where transfer-in and transfer-out students are excluded from the enrollment and exam-taking counts. However, it still does not take into account grade repeaters.

Similar to the results presented in the main report, we find no clear trends in within-grade dropout rates across grades or school year (Figure I.1). Dropout was generally highest in 1st grade for both SDPP schools and control schools. Within-grade dropout rates ranged from  $-7.7$  percent to 10.2 percent. Dropout rates are consistent across SDPP and control schools. Of 18 comparisons made, there was only one statistically significant difference between SDPP and control schools, which was for 1st grade in SY 2013.

Figure I.1. School within-grade dropout rates, by grade and school year (excluding transfer students)



Sources: SDPP baseline and follow-up school records data collection, SY 2011, 2012, and 2013.

Note: Within-grade dropout is defined by the number of students who were enrolled in school at the beginning of the school year and the number enrolled at year's end. A student is considered to be enrolled in the school at the end of the year if he or she took the end-of-year exams.

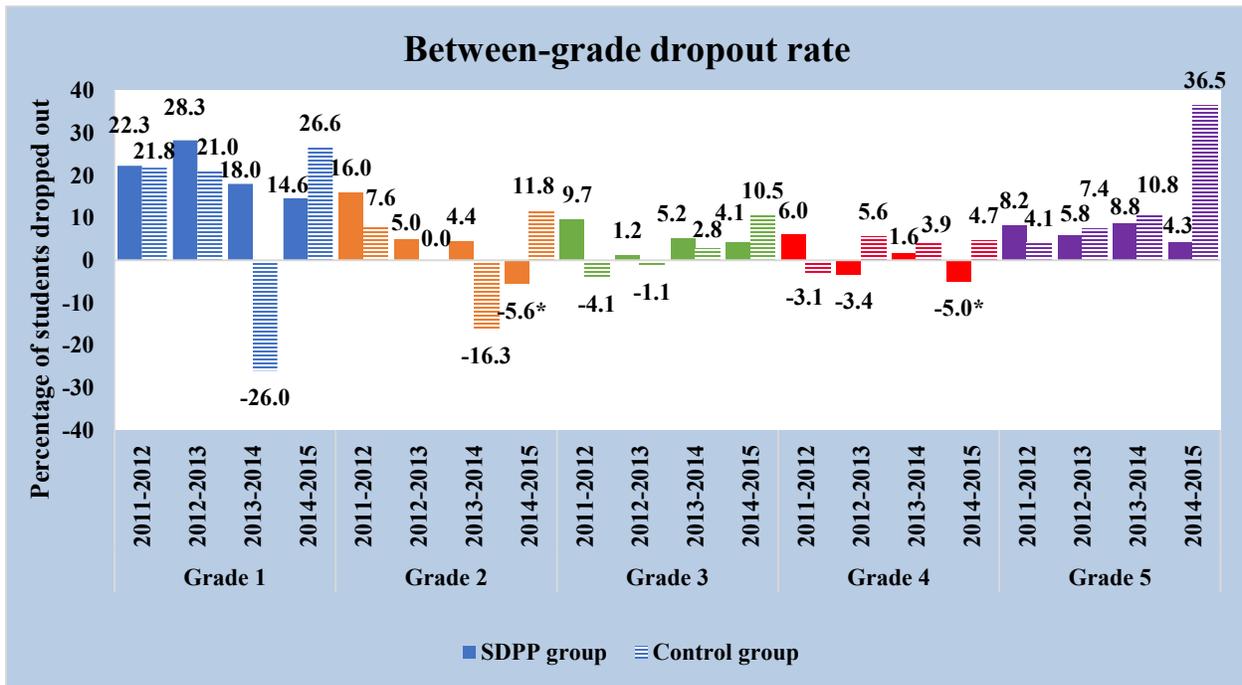
The analysis is based on aggregate enrollment count data for SY 2011, 2012, and 2013 1st- through 6th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

Between-grade dropout rates also varied widely across grades and school years, but were generally highest in the first grade (Figure I.2). First grade between-grade dropout rates ranged from 21.8 percent to 22.3 percent from SY 2011 to SY 2012 to 14.6 to 26.6 percent from SY 2013 to SY 2014. Dropout rates are consistent across SDPP and control schools. There were only two statistically significant differences in all grade-year combinations examined.

Figure I.2. School between-grade dropout rates, by grade and school year (excluding transfer students)



Sources: SDPP baseline and follow-up school records data collection, SY 2011, 2012, 2013, 2014, and 2015.

Note: Between-grade dropout is measured by the number of students enrolled at the beginning of an initial school year and the number enrolled at the beginning of the following year.

The analysis is based on aggregate enrollment count data for SY 2011, 2012, 2013, 2014, and 2015 1st- through 6th-grade students.

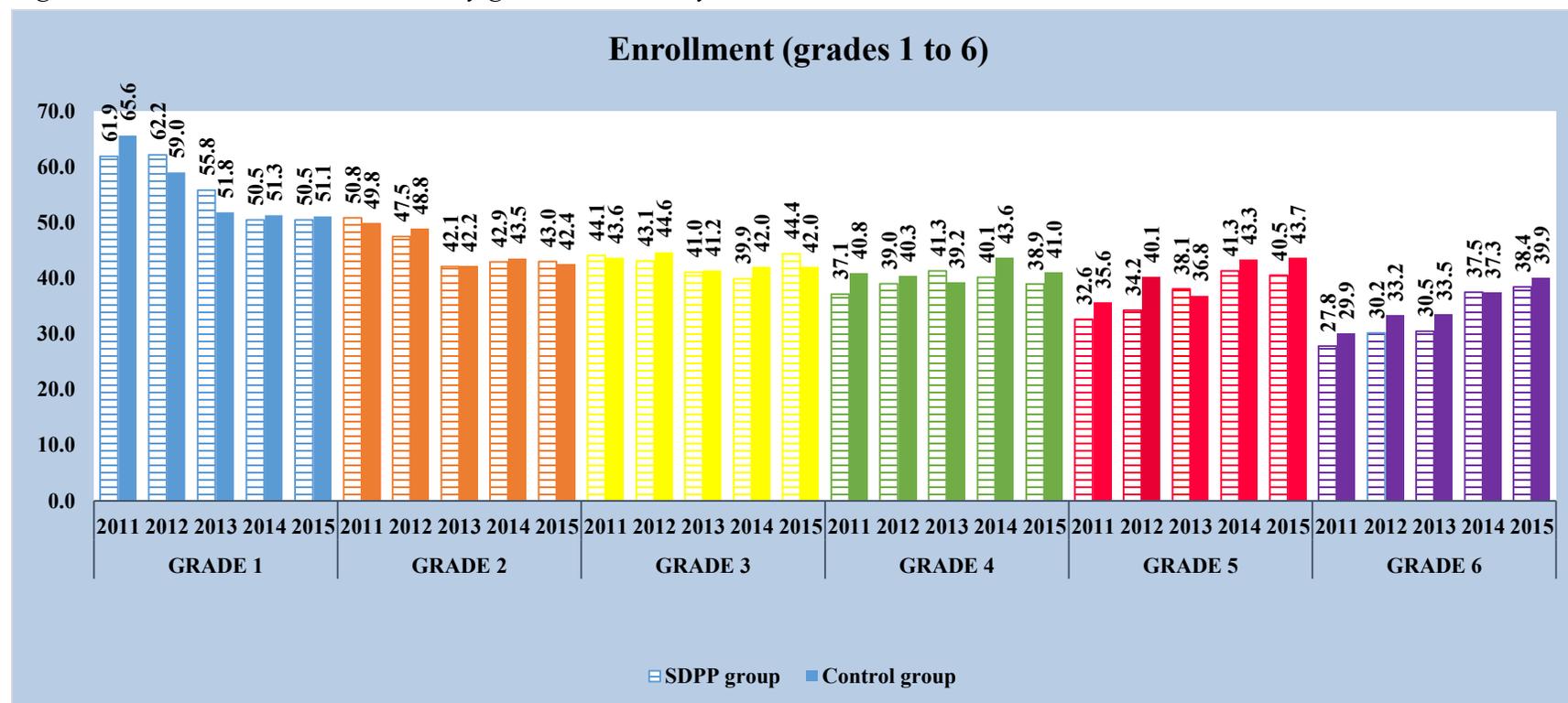
Differences between SDPP and control group means were tested using two-tailed t-tests.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

### C. School enrollment

Enrollment data was collected at the beginning of the school year, from each school, using the school questionnaire. Start-of-year enrollment was determined based on the number of students listed in the class register enrollment roster. Average school-level start-of-year enrollment counts were generally highest in 1st grade, then steadily decreased through 6th grade. (Figure I.3). The difference in enrollment between control and SDPP schools was not statistically significant in any grade during any school year.

Figure I.3. School enrollment counts, by grade and school year



Sources: SDPP baseline and follow-up school records data collection, SY 2011, 2012, 2013, 2014, and 2015.

Note: Average school-level enrollment is measured by the number of students enrolled at the beginning of each school year in a school.

The analysis is based on aggregate enrollment count data for SY 2011, 2012, 2013, 2014, and 2015 1st- through 6th-grade students.

Differences between SDPP and control group means were tested using two-tailed t-tests.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

#### **D. School attendance**

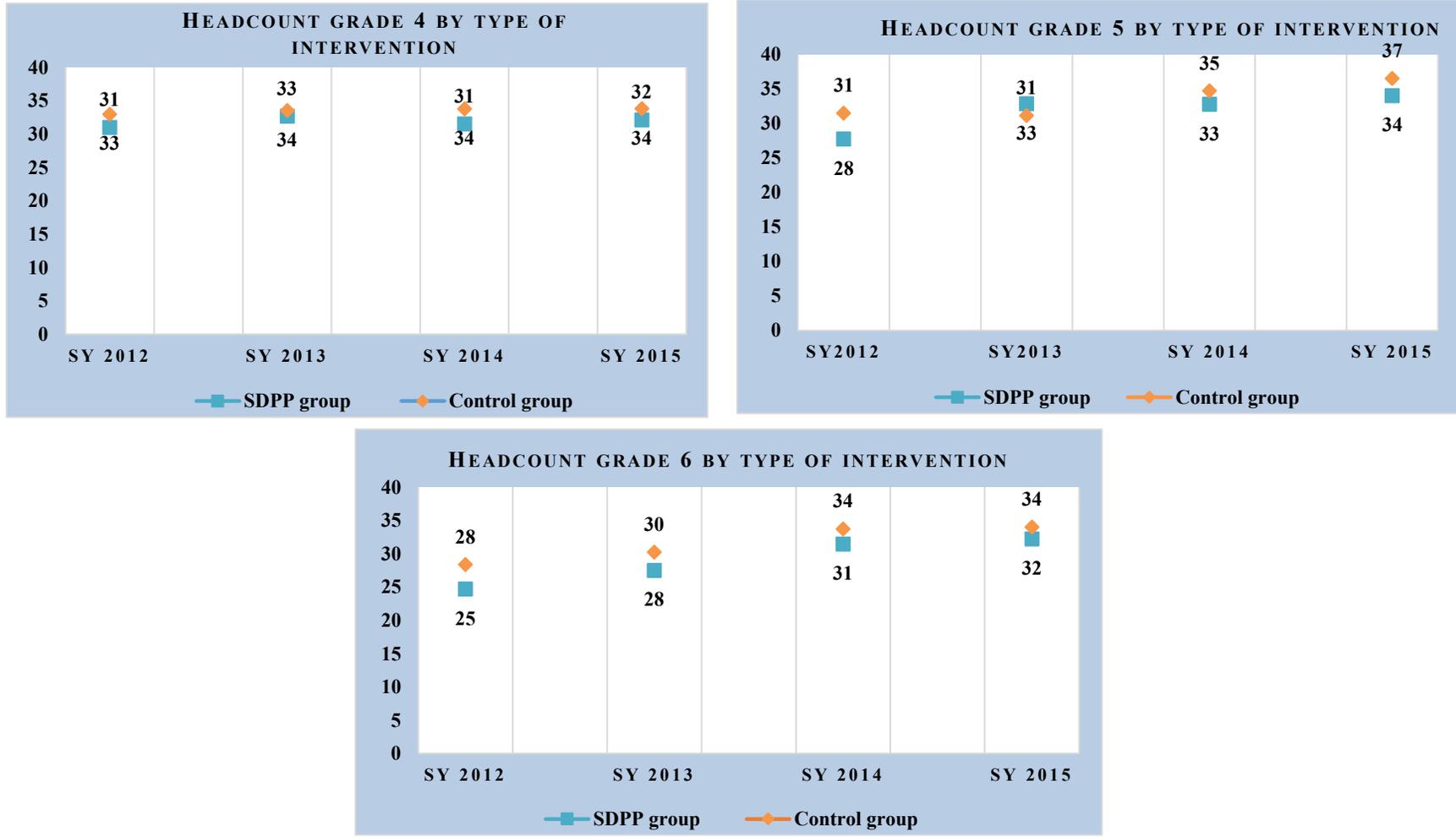
SDPP used two different data sources to examine trends in attendance: headcount of students in 4th-, 5th, and 6th-grade classrooms by direct observation and attendance information in school records.

- *Headcount:* During each round of data collection, the SDPP team collected headcounts of students present in 4th-, 5th, and 6th-grade classrooms on the day of data collection by entering classrooms during third period and counting the number of students present.
- *School Record:* Data collectors retrieved data from school records, and recorded monthly attendance data for each individual student.

The main impact analysis on attendance, presented in Section VI.C of the main report, uses student-level attendance rates. Data are available for every month of the school year. Because school records are maintained by teachers, data may be subject to error through poor record-keeping or intentional misrepresentation. Head counts, collected through direct observation, provide additional information that may serve as a check of the data collected through student records. However, headcounts are an aggregate measure collected on only one day of the school year at one point in time. Headcounts taken at a time after morning attendance are usually lower than the morning attendance records might indicate. We therefore examined the levels and trends in student attendance rates using both headcounts and student level attendance data from school records to see if they exhibit different patterns.

The headcounts collected by SDPP during each data collection round show that the average number of 4th-, 5th, and 6th-grade students present at the time of data collection was similar in SDPP and control schools and increased from SY 2012 to SY 2015 (Figure I.4). Twenty-five to 33 students, on average, were present in 4th-, 5th, and 6th-grade in SY 2012, compared to 32 to 37 students in SY 2015.

Figure I.4. Grade 4–6 headcount, by school year



Sources: SDPP baseline and follow-up school records data collection, SY 2011, 2012, 2013, 2014, and 2015.

Note: Head counts were collected in grade 4, 5, and 6 classes during 3rd period on the day of data collection. The month varied depending on the round of data collection.

Differences between SDPP and control group means were tested using two-tailed t-tests.

\*\*\*/\*\*/\* Statistically significant difference at the .01/.05/.10 level.

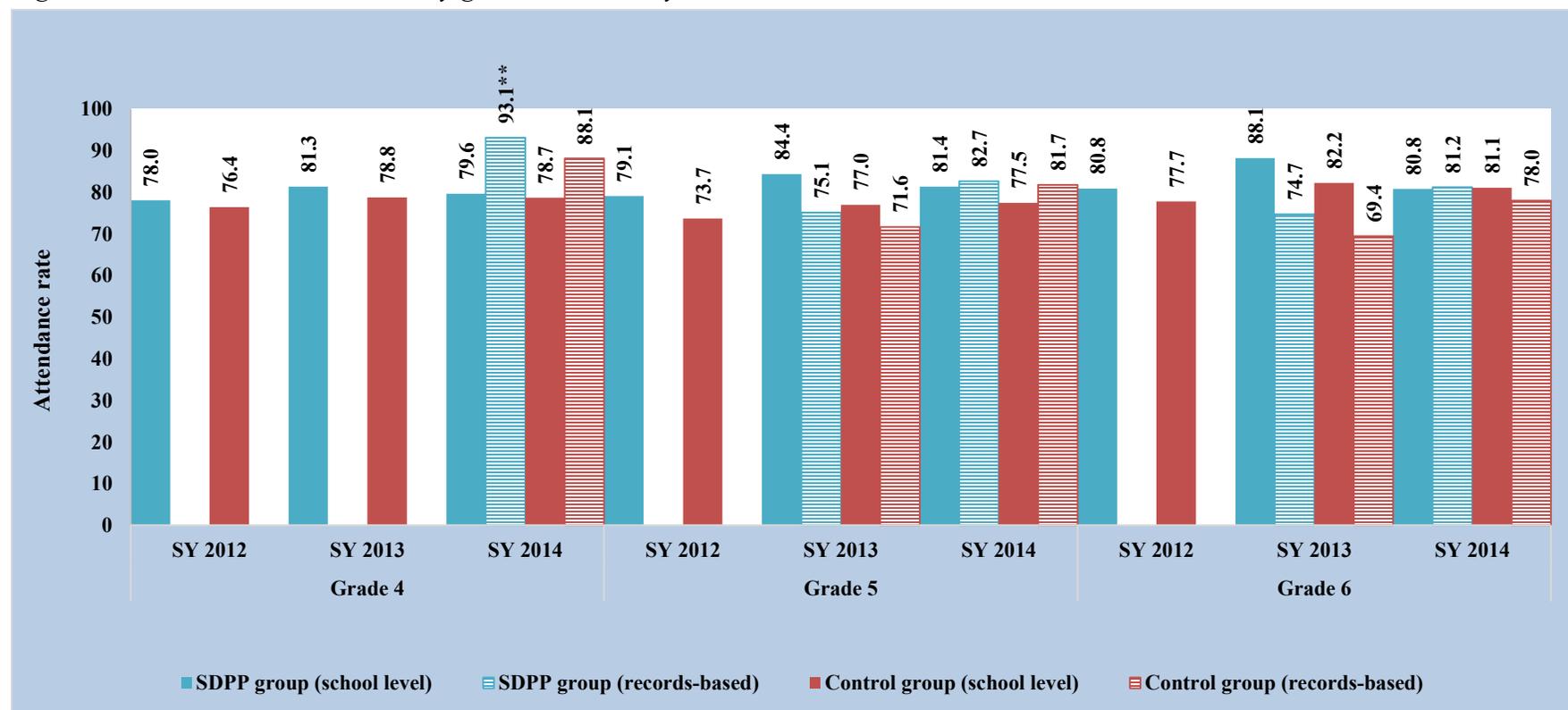
Next, we compared attendance rates as determined through direct observation and student records. School-level attendance rates from SY 2012 to SY 2014 were calculated by dividing the headcount, collected on the day of data collection in each of the school years, by the total enrollment for each grade for that school year. Average attendance rate based on the student records for the four school years is calculated by averaging monthly attendance of the cohort of 4th-, 5th-, and 6th-grade students enrolled in that school year and included in the impact analysis.

Trends in school attendance rates based on headcounts and student records student-level attendance rates are very similar. The rates based on both data sources remained fairly stable across school years. There was one statistically significant difference between SDPP and control schools using aggregate attendance based on individual student school records.<sup>35</sup> The SDPP group attendance rate based on head counts was 79.6 percent in 4th grade in SY 2014, compared to an attendance rate of 93.1 percent based on student records (Figure I.5). The attendance rates calculated through headcounts were similar to those calculated through school records.

---

<sup>35</sup> We observed a statistically significant impact for daily attendance in *Volume 1: Main Findings*, which was analyzed using student-level data and thus could exploit more variation among the two groups. In contrast, although the analysis here uses student-level attendance records, this data is aggregated to the school level. We lose important variation when using aggregate school-level data, which may be why there is a lack of statistical significance for most comparisons.

Figure I.5. School attendance rates, by grade and school year



Sources: SDPP baseline and follow-up school records data collection, SY 2012, 2013, and 2014.

Note: School-level attendance is calculated by dividing the head count of students present on the day of data collection by the total enrollment for each grade. Records-based attendance is calculated for the month of data collection using student monthly attendance from student records and includes only students included in the analysis.

Differences between SDPP and control group means were tested using two-tailed t-tests.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

## **APPENDIX J. PROPENSITY SCORE ANALYSIS OF SCHOOLS WITH HIGH FIDELITY OF IMPLEMENTATION AND STUDENTS IDENTIFIED BY THE EWS**

The main impact analysis presents the impact of SDPP as it was implemented. However, it is possible that not all SDPP schools implemented the intervention as intended. Indeed, the evaluation of the fidelity of implementation (FOI) of the EWS and after-school activity components showed that there was variation in how well schools implemented the EWS (STS 2014a). Also, one of the SDPP study’s research questions pertains to impacts of the SDPP Program for students most at-risk of dropping out of school. In Section VI of the main report, we presented the impacts of SDPP for students identified as at risk based on their baseline characteristics (as documented in school records). As a result, the at-risk students are not necessarily the same as those identified as at risk of dropout by the EWS in SDPP schools, although there is substantial overlap in these groups.<sup>36</sup>

Examining the impact of the program on schools that implemented the EWS well and on students identified through the EWS is of interest, given that the program specifically aimed to improve their outcomes. Estimates of these impacts are known as “treatment-on-the-treated” (TOT) impacts. The TOT impacts cannot be estimated using the rigorous random assignment design of the study. Instead, they rely on less rigorous quasi-experimental techniques. We describe details of these techniques and present TOT impact findings in this Appendix.

The central challenge in estimating the TOT impacts of SDPP is finding an appropriate comparison group. For schools that implemented the intervention well, we do not know precisely why the FOI was higher or lower in specific schools. However, it is likely that there were specific causes. For example, schools with stronger administrative staff or greater commitment to the SDPP Program may have had higher FOI. Indeed, SDPP schools with high FOI had higher rates of teacher attendance (Table J.1). Because the FOI among SDPP schools is unlikely to be random, comparing schools that had a high FOI to the full sample of control schools is not appropriate.

---

<sup>36</sup> Not all students included in the at-risk subgroup based on their initial characteristics were identified through the EWS, and some students who were not included in the at-risk subgroup were identified through the EWS. Moreover, the analyses presented in *Volume 1: Main Findings* present the ITT impact estimates and do not take into account the extent to which identified students participated in the services SDPP was designed to provide.

*Table J.1. Pre-program exposure characteristics for schools with high FOI compared with characteristics of all control schools (grades 4-6, SY 2012) (percentage unless indicated otherwise)*

|   | <b>High FOI schools in SDPP group</b> | <b>All control schools</b> |
|---|---------------------------------------|----------------------------|
| <b>Offer grades 1 through 6</b>                             | 100.0                                 | 100.0                      |
| Enrollment (mean number of students)                        |                                       |                            |
| Grade 4 (target grade)                                      | 40.77                                 | 41.49                      |
| Grade 5 (target grade)                                      | 34.00                                 | 39.71                      |
| Grade 6 (target grade)                                      | 31.90                                 | 33.09                      |
| Grades 1 through 6  | 256.71                                | 260.26                     |
| Number of teachers  | 9.52                                  | 10.29                      |
| <b>Attendance rate at time of headcount (% of students)</b> |                                       |                            |
| Grade 4 (target grade)                                      | 83.8                                  | 78.8                       |
| Grade 5 (target grade)                                      | 84.9                                  | 79.9                       |
| Grade 6 (target grade)                                      | 85.9                                  | 82.9                       |
| <b>Grades 4, 5, and 6 teacher attendance rate</b>           |                                       |                            |
| January   | 97.0**                                | 93.5                       |
| February  | 96.0                                  | 94.0                       |
| March   | 96.2                                  | 94.6                       |
| <b>Active external school programs<sup>a</sup></b>          |                                       |                            |
| No other active programs                                    | 19.4                                  | 22.3                       |
| School feeding  | 71.0                                  | 72.3                       |
| Health or hygiene   | 16.1                                  | 20.2                       |
| Other active programs                                       | 48.4                                  | 45.7                       |
| School accessible by all types of vehicles                  | 74.2                                  | 72.3                       |
| <b>Sample size</b>  |                                       |                            |
| <b>Schools</b>  | <b>31</b>                             | <b>94</b>                  |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, and September 2014.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. The analysis accounts for clustering of students within schools. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Table V.2 of the main report for definition of behavior performance scores.

<sup>a</sup> Differences between SDPP and control group distributions were tested using a chi-squared test.

\*\*\*/\*\*/\* Difference between the indicated SDPP group and the control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between the indicated SDPP group and control group distributions is statistically significant at the .01/.05/.10 level.

Similarly, we cannot compare EWS-identified students to the full control group because these students were identified based on their assessed risk of dropout, not through a random process. The students identified as at-risk through the EWS in SDPP schools and the full group of control school students are likely to have different pre-existing characteristics because control group students include those who would have been identified as at-risk if they had been assigned to the SDPP group as well as those who would not have been identified as at-risk. Indeed, SDPP group students who were identified through the EWS were more likely to be different based on their baseline characteristics than all students in control schools, and this difference was statistically significant (Table J.2). Because of these pre-existing differences, we would not be able to distinguish impacts of the SDPP Program from pre-existing differences between the students identified through the EWS in SDPP schools and the full sample of students in control schools.

*Table J.2. Pre-program exposure characteristics for students identified through the EWS compared with characteristics of all control group students (SY 2012, SY 2013, SY 2014)*

|  | Students identified through EWS | All control students |
|--|---------------------------------|----------------------|
| <b>Demographic characteristics</b>                             |                                 |                      |
| Female   | 46.0***                         | 48.8                 |
| Over-age for grade   | 13.4                            | 11.3                 |
| <b>Factors related to risk of dropout</b>                      |                                 |                      |
| Daily Attendance during January–March 2012                     | 92.7                            | 92.5                 |
| Academic Performance on 1st Trimester Exam Scores (range 1-10) |                                 |                      |
| Math   | 5.64                            | 5.67                 |
| Portuguese   | 5.76                            | 5.87                 |
| Tetun  | 6.17                            | 6.22                 |
| Behavior Rated Good or Better during 1st Trimester             | 7.03                            | 7.16                 |
| <b>Sample size</b>   |                                 |                      |
| <b>Schools</b>   | <b>97</b>                       | <b>94</b>            |
| <b>Students</b>  | <b>4,496</b>                    | <b>11,674</b>        |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, and September 2014.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. The analysis accounts for clustering of students within schools. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Table V.2 for definition of behavior performance scores.

<sup>a</sup> Differences between SDPP and control group distributions were tested using a chi-squared test.

\*\*\*/\*\*/\* Difference between the indicated SDPP group and the control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between the indicated SDPP group and control group distributions is statistically significant at the .01/.05/.10 level.

The first step in calculating an accurate TOT impact estimate requires identifying an appropriate comparison group. For SDPP schools with high FOI, the comparison group consists of control group schools with similar characteristics to the SDPP schools that had high FOI scores. For students identified through the EWS in the SDPP schools, the comparison group consists of an appropriate group of control school students who would have been identified through the EWS services had they been in the treatment group.<sup>37</sup> We estimate the TOT impacts in three steps:

1. Estimating a propensity score:
  - a. For schools, it is the probability that a school will implement the intervention with high FOI based on relevant school characteristics;
  - b. For students, it is the probability of being identified through the EWS for services for each student based on relevant school characteristics and student characteristics before they entered the target grade;
2. Selecting an appropriate comparison group using the estimated propensity score; and
3. Estimating the TOT impacts of SDPP by comparing outcomes between the two groups.

Each of these steps is described in more detail below.

#### **A. Estimating Propensity Scores**

For the propensity score analysis, we generated propensity scores using statistical models that predicted the likelihood of a school implementing the EWS well and of students being identified through the EWS.

*Propensity score estimation based on the FOI.* We used the FOI scores SDPP schools received for their implementation of the EWS. A school was defined to have high FOI if it scored higher than the mean FOI score in the sample, 70 percent. Thirty-one of 97 schools in the sample had high FOI. We also identified several pre-intervention school characteristics, including the district the school was located in, as possible predictors. As the first step of the propensity score matching technique, we attempted to identify a set of variables that would predict whether a school would have a high FOI score. We began with a wide range of candidate variables. From the pool of candidate variables, we selected an initial set of predictor variables that were most likely to be associated with having a high FOI score. The initial set of predictor variables were total enrollment in the school during SY 2012, the student teacher ratio in grades 1 through 6 during SY 2012, whether the school had a high percentage of at-risk students at baseline, whether the school was accessible by all types of vehicles, the total number of facilities from the list of facilities in our questionnaire that were available in the school at baseline, and the total number of classrooms in

---

<sup>37</sup> A commonly used approach to estimating TOT impacts is the Bloom adjustment, which inflates the ITT estimates by the inverse of the proportion of SDPP students who actually receive the program (Bloom 1984). The adjustment is based on the assumption that the impact of a program on students who did not receive the program is zero. This assumption is not appropriate in the context of SDPP, because all students could have been affected by teacher training and awareness, and all students had access to the second hour of the after-school activities. While those that were identified through the EWS were eligible for EWS specific services as well as the one hour after school tutoring, in smaller schools where there were fewer grade 9 students, all student were eligible to participate in the after school tutoring program.

the school as the initial set of predictors. We selected additional predictors from the remaining pool of candidate variables using a structured process designed to identify the variables most strongly predictive of schools with a high FOI score.

We used the initial set of predictor variables in a simple logistic regression model and assessed their prediction rate. Subsequently, we iteratively added more predictor variables to examine whether there were improvements in the prediction rate. For each iteration, the candidate variable that increased the prediction rate the most was then added to the prediction model. We repeated the process from the remaining pool of candidate variables until no variable increased the prediction rate. We assessed the prediction rate using the “hit or miss” method where variables are chosen to maximize within-sample prediction rates. The prediction rate of the model was about 89 percent. Our process identified 3 predictor variables, in addition to the initial predictor variables, that predicted the probability of a school having a high FOI score: (1) indicator for the district Manatuto, (2) indicator for the district Viqueque, and (2) the student teacher ratio in grades 6 during SY 2012. We used the full set of predictor variables to estimate the final propensity score model. We used the results from the propensity score model to calculate each school’s probability of having a high FOI score.

*Propensity score estimation for identification through EWS.* We followed a similar process to estimate propensity scores for the likelihood of being identified through the EWS.<sup>38</sup> We used data from SDPP schools and SDPP students identified through the EWS to estimate these scores. Data includes information on which students were identified through the EWS, time-invariant characteristics of students, characteristics of the students before they entered the target grade, pre-intervention characteristics of the schools, and interactions between school and student characteristics.<sup>39</sup> The initial set of predictor variables were whether the student was identified as at-risk by our at-risk identification process, the variables that were used in our at-risk identification process, gender, over-age, whether the school with a high percentage of at-risk students at baseline, whether the school was accessible by all types of vehicles, and the total number of facilities from the list of facilities in our questionnaire that were available in the school at baseline. After including this initial set of predictor variables in the model, we selected additional predictors from the remaining pool of candidate variables using the same process described above on an estimation sample.

---

<sup>38</sup> For the TOT estimate involving students identified through the EWS, we did not include the SY 2014 4th grade cohort because almost 70 percent of these students were missing information on whether they were identified through the EWS. Of the remaining cohorts, approximately 7 percent of SDPP students in the analysis sample are missing information on whether they were identified through the EWS, and most of these students are from the SY 2013 4th grade. Our propensity score models therefore predict the probability of a student both (1) having non-missing information on whether the student was identified through the EWS, and (2) being identified through the EWS for SDPP services. Subsequently, our analysis using both approaches estimates the impact of SDPP on students identified through the EWS and who have non-missing information on whether they were identified.

<sup>39</sup> To develop the model we used characteristic variables without imputing values for missing data.

Once the set of predictor variables was finalized, we tested the prediction rate of the model on a reserve sample to ensure that the prediction rate is not sensitive to sample selection.<sup>40</sup> The prediction rate of the model on the estimation sample and the reserve sample was about 58 to 59 percent. Our process identified 7 predictor variables, in addition to the initial predictor variables that predicted the probability of being identified through the EWS: (1) whether the school had electricity and whether the school had security, (2) an indicator for the district Bobonaro, (3) an indicator for the district Liquiçá, (4) the interaction between the student’s gender and whether the school is accessible by all types of vehicles, (5) the interaction between the student’s gender and whether the school has a high percentage of at-risk students, and (6) the interaction between the at-risk score for Tetun used in our at-risk identification process, and (7) whether the school is accessible by all types of vehicles. We used the full set of predictor variables to estimate the final propensity score model. We used the results from the propensity score model to calculate each student’s probability of being identified through the EWS for both SDPP and control group students.<sup>41</sup>

## **B. Selecting an Appropriate Comparison Group**

The propensity scores generated in the first step are used to select an appropriate comparison group from the entire group of control schools, in case of the FOI-based analysis, and from the entire group of students in the control schools, in case of the EWS-based analysis. We use two methods to generate this comparison group for each analysis (Table J.3):

1. A traditional matching approach, in which schools that implemented the EWS well, and students in the SDPP group who were identified through the EWS, are separately matched to similar control schools and students and the outcomes of these two groups are compared to estimate program effects.
2. A “likely to be high FOI school” or “likely to be identified student” approach, in which the schools most likely to implement the EWS well and students most likely to be identified through the EWS, respectively, are selected using a model within both the SDPP and control groups, and the outcomes of these two groups, for each type, are compared to estimate impacts.

---

<sup>40</sup> We split the sample into an estimation and a reserve sample to develop and test the model. We could not do this when we developed the propensity score model for the FOI scores because the number of schools was too small to split the sample.

<sup>41</sup> After the model was developed we used variables with missing values imputed with school-level means, except for the gender variable.

*Table J.3. Selecting an appropriate comparison group under traditional matching and “likely to be high FOI” or “likely to be identified” matching approaches*

|  | Traditional matching  |  | “Likely to be high FOI” or “likely to be identified” matching                       |  |
|--|---|--|---|--|
|  | SDPP group  | Control group  | SDPP group  | Control group  |
| Schools with high fidelity of implementation (FOI) | Schools that actually implemented with high FOI                         | Control group schools identified through model to be likely to implement with high FOI | SDPP group schools identified through model to be likely to implement with high FOI | SDPP group schools identified through model to be likely to implement with high FOI  |
| Students identified through the EWS                | Students in the SDPP group who were actually identified through the EWS | Students in the control group who are likely to have been identified through the EWS   | Students in the SDPP group who are likely to have been identified through the EWS   | Students in the control group who are likely to have been identified through the EWS |

In the traditional approach to propensity-score matching, SDPP group schools with high FOI were matched to schools in the control group with similar propensity scores (“nearest neighbor”). Under this “nearest neighbor” matching approach, the same control group school could be matched to more than one SDPP school. In order to account for this, when control group schools were matched more than once, we gave them a weight equal to the number of SDPP schools to which they were matched in the analysis. Similarly, each SDPP group student identified through the EWS was matched to a student in the control group who had the most similar propensity score. Again, the same control group student could be matched to more than one SDPP student. In order to account for this, when a control group student was matched more than once, we gave the student a weight equal to the number of SDPP students to whom they were matched in the analysis. This method is likely to generate two research groups that are similar in their observed baseline characteristics. However, these groups might still differ in terms of characteristics not measured as part of the evaluation. Therefore, the TOT impacts may reflect pre-existing differences between the groups rather than the true effect of SDPP, and they are not as credible as the main impacts based on the study’s random assignment design.

The “likely high FOI” approach draws on propensity scores to identify schools in both research groups who are most likely to have implemented the EWS well if the school was offered SDPP. We created subgroups of schools with high propensity scores within both the SDPP and control groups using a cutoff value for the propensity score such that the number of SDPP schools above the cutoff was the same as the number of SDPP schools with a high FOI score. Similarly, the “likely to be identified” approach draws on propensity scores to identify students in both research groups who are most likely to be identified through the EWS to receive services if the school was offered SDPP. We created subgroups of students with high propensity scores within both the SDPP and control groups using a cutoff value for the propensity score such that the number of SDPP students above the cutoff was the same as the number of SDPP students identified through the EWS (and without missing information). The approach used to create the “likely high FOI” and “likely to be identified” samples preserves the study’s experimental framework because the predicted probability of implementing well or receiving services is based entirely on initial characteristics. The two groups, under each analysis, are therefore similar on both measured and

unmeasured characteristics, and differ only in whether they were exposed to SDPP.<sup>42</sup> However, if the propensity-score model cannot accurately predict which schools implemented the EWS well and which students are likely to be identified, the TOT estimates will not give an accurate estimate of the program’s impact on schools that implemented the EWS well and students identified to receive services, respectively.

The credibility of the TOT estimates depends on the extent to which the probabilities are estimated accurately by the model. In the traditional propensity score matching approach based on the FOI, we compared outcomes of students in SDPP schools with a high FOI to outcomes of students in control group schools predicted by the models to have high FOI if their school had been offered the SDPP Program. Similarly, for the traditional propensity score matching approach based on the EWS, outcomes of SDPP students who were identified through the EWS were compared to outcomes of control group students predicted by the models to have been identified if their school had been offered the SDPP Program. If the model has poor predictive power, we cannot be confident that the two groups are truly comparable. Similarly, in the “likely to be high FOI school” matching approach based on the FOI, we compare outcomes of students in SDPP schools with propensity scores above a particular cutoff to those of students in control schools with propensity scores above that same cutoff. In the “likely to be identified” matching approach, we compare outcomes of SDPP and control school students with propensity scores above a particular cutoff. If a large proportion of “likely to be high FOI” schools did not actually have high FOI scores or a large proportion of “likely to be identified” students were not actually identified through the EWS in SDPP schools, the estimated TOT impacts will be diluted. As the prediction rate of the model decreases, the percentage of schools and students identified through the model will approach the percentage in the SDPP sample as a whole, and the TOT impact estimates will be similar to the ITT estimates. The predictive power of the propensity score model is therefore important in both approaches, though for different reasons.

The FOI model had very high predictive power, although not perfect (Table J.4). The EWS model had low predictive power (Table J.5). Thus the estimates generated using the “likely to be identified” method might underestimate the true impact of SDPP on students identified through the EWS. However, research also suggests that if findings from the traditional and “likely high FOI” or “likely to be identified” methods are similar, we can be more confident that they reflect the program’s TOT impacts (Schochet, Peter Z., and John Burghardt 2007).

---

<sup>42</sup> The “likely to be identified” analysis is similar to the subgroup analysis presented in the main report in that the two groups of “likely to be identified” students are similar on both measured and unmeasured characteristics, and differ only in whether they were exposed to SDPP. However, the sample for the “likely high FOI” and “likely to be identified” approaches could include schools that did not implement the EWS well or students who were not identified through the EWS, respectively, if they had propensity scores higher than the threshold.

*Table J.4. Actual High FOI schools in SDPP group, by “likely to be high FOI” status (SY 2012, SY 2013, SY 2014) (percentages of students unless otherwise indicated)*

|   | <b>High FOI</b> |
|---|-----------------|
| All SDPP schools  | 33.3            |
| SDPP schools included in “likely to be high FOI” sample   | 83.9            |
| SDPP schools excluded from “likely to be high FOI” sample | 8.0             |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, and September 2014.

Note: Likely receivers consist of SDPP group students with the highest propensity scores. The cutoff value is set such that the number of likely receivers is equal to the number of actual receivers.

*Table J.5. Actual EWS identification status of SDPP group students, by “likely to be identified” status (SY 2012, SY 2013, SY 2014) (percentages)*

|  | <b>Identified through EWS</b> |
|--|-------------------------------|
| All SDPP group students  | 39.7                          |
| SDPP group students included in “likely to be identified” sample   | 48.0                          |
| SDPP group students excluded from “likely to be identified” sample | 33.9                          |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, and September 2014.

Note: Likely receivers consist of SDPP group students with the highest propensity scores. The cutoff value is set such that the number of likely receivers is equal to the number of actual receivers.

### **C. Estimating TOT Impacts**

After using the propensity-score models to create research samples for each set of analyses, we estimated the TOT impacts using methods similar to those used to calculate the main impact estimates. The propensity score methods used should lead to well-matched research groups. The SDPP and control group students used in the TOT analyses are well matched on observable characteristics (Table J.6 and J.7). Differences in mean characteristics are small for samples used in both types of analyses. In the sample for the traditional matching approach based on FOI and based on the EWS, there are no significant between-group differences among the baseline characteristics examined. As discussed earlier, with the traditional matching approach, it is not possible to assume that the groups are equivalent on characteristics that are not observed. In the “likely to be high FOI school” sample and the “likely to be identified” sample, there are no significant differences between the groups on the characteristics examined.

Table J.6. Pre-program exposure characteristics of SDPP and control group students included in the FOI propensity score analysis (SY 2012, SY 2013, SY 2014) (percentages of students unless otherwise indicated)

|  | Traditional matching approach |               | “Likely to be high FOI” matching approach |               |
|--|-------------------------------|---------------|---|---------------|
|  | SDPP group                    | Control group | SDPP group                                | Control group |
| <b>Demographic characteristics</b>                             |                               |               |   |               |
| Female   | 48.3                          | 47.7          | 48.9                                      | 47.4          |
| Over-age for grade   | 11.6                          | 8.5           | 10.4                                      | 8.8           |
| <b>Factors related to risk of dropout</b>                      |                               |               |   |               |
| Daily Attendance during January–March 2012 <sup>a</sup>        | 87.6                          | 85.9          | 88.9                                      | 87.5          |
| Academic Performance on 1st Trimester Exam Scores (range 1-10) |                               |               |   |               |
| Math   | 5.63                          | 5.60          | 5.71                                      | 5.60          |
| Portuguese   | 5.80                          | 5.80          | 5.81                                      | 5.79          |
| Tetun  | 6.15                          | 6.13          | 6.19                                      | 6.10          |
| Behavior Rated Good or Better during 1st Trimester             | 7.19                          | 7.18          | 7.12                                      | 7.08          |
| <b>Sample size</b>   |                               |               |   |               |
| <b>Schools</b>   | <b>31</b>                     | <b>20</b>     | <b>31</b>                                 | <b>27</b>     |
| <b>Students</b>  | <b>5,222</b>                  | <b>3,656</b>  | <b>5,231</b>                              | <b>5,059</b>  |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, and September 2014.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. The analysis accounts for clustering of students within schools. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Table V.2 for definition of behavior performance scores.

<sup>a</sup> Only defined for students in the sample that were in baseline data collection.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between SDPP and control group distributions is statistically significant at the .01/.05/.10 level.

Table J.7. Pre-program exposure characteristics of SDPP and control group students included in the EWS identification propensity score analysis (SY 2012, SY 2013, SY 2014)

|  | Traditional matching approach |               | “Likely to be identified” matching approach |               |
|--|-------------------------------|---------------|---|---------------|
|  | SDPP group                    | Control group | SDPP group                                  | Control group |
| <b>Demographic characteristics</b>                             |                               |               |   |               |
| Female   | 46.0                          | 45.5          | 41.3  | 42.4          |
| Over-age for grade   | 13.2                          | 14.7          | 14.5  | 12.8          |
| <b>Factors related to risk of dropout</b>                      |                               |               |   |               |
| Daily Attendance during January–March 2012 <sup>a</sup>        | 92.7                          | 91.5          | 90.6  | 89.8          |
| Academic Performance on 1st Trimester Exam Scores (range 1-10) |                               |               |   |               |
| Math   | 5.64                          | 5.76          | 5.37  | 5.39          |
| Portuguese   | 5.76                          | 5.85          | 5.58  | 5.67          |
| Tetun  | 6.17                          | 6.15          | 5.94  | 5.91          |
| Behavior Rated Good or Better during 1st Trimester             | 7.03                          | 7.12          | 6.70  | 6.88          |
| <b>Sample size</b>   |                               |               |   |               |
| <b>Schools</b>   | <b>96</b>                     | <b>94</b>     | <b>86</b>                                   | <b>78</b>     |
| <b>Students</b>  | <b>4,448</b>                  | <b>5,962</b>  | <b>4,451</b>                                | <b>4,329</b>  |

Source: SDPP baseline and follow-up school records data collection, May 2012, May 2013, March 2014, and September 2014.

Note: Differences between SDPP and control group means were tested using two-tailed t-tests unless otherwise indicated. The analysis accounts for clustering of students within schools. Sample sizes for some characteristics may be smaller due to missing responses.

Refer to Table V.2 for definition of behavior performance scores.

<sup>a</sup> Only defined for students in the sample that were in baseline data collection.

\*\*\*/\*\*/\* Difference between SDPP and control group means is statistically significant at the .01/.05/.10 level.

†††/††/† Difference between SDPP and control group distributions is statistically significant at the .01/.05/.10 level.

**TOT impacts in schools with high fidelity of implementation.** Based on both the traditional and “likely high FOI” matching approaches, students in schools with high fidelity of implementation scored higher than similar students in control schools on behavioral attitudes toward school, and this difference was statistically significant (Table J.8). This is consistent with the main analysis for at-risk students in all schools presented in Figure VII.1 of the main report. However, under both matching approaches, students in SDPP schools scored lower on emotional attitudes toward school, and this difference was statistically significant, a finding inconsistent with the main analysis findings.

Table J.8. SDPP’s quasi-experimental impacts on the primary measures of program effectiveness at endline for students in schools with high fidelity of implementation, by method of matching (SY 2012, SY 2013, and SY 2014)

|   | Traditional matching approach |               |         | “Likely to be high FOI” matching approach |               |          |
|---|-------------------------------|---------------|---------|---|---------------|----------|
|   | SDPP Group                    | Control Group | Impact  | SDPP Group                                | Control Group | Impact   |
| <b>School Dropout</b>   |                               |               |         |   |               |          |
| Global dropout rate <sup>a</sup>  | 10.7                          | 12.2          | -1.5    | 13.8                                      | 16.1          | -2.4     |
| <b>School Engagement</b>  |                               |               |         |   |               |          |
| Daily attendance rate <sup>b</sup> (January 2012-November 2012; January 2013-November 2013; January 2014-November 2014) | 84.0                          | 84.2          | -0.2    | 82.4                                      | 82.0          | 0.3      |
| <b>At-Risk Student Attitudes Toward School<sup>c</sup></b>  |                               |               |         |   |               |          |
| Emotional attitudes toward school   | 1.85                          | 1.88          | -0.03*  | 1.84                                      | 1.88          | -0.05*** |
| Cognitive attitudes toward school   | 1.72                          | 1.72          | -0.01   | 1.72                                      | 1.73          | -0.01    |
| Behavioral attitudes toward school  | 1.80                          | 1.75          | 0.05*** | 1.79                                      | 1.75          | 0.04**   |
| <b>Sample size</b>  |                               |               |         |   |               |          |
| <b>Schools</b>  | <b>31</b>                     | <b>20</b>     |         | <b>31</b>                                 | <b>27</b>     |          |
| <b>Students</b>   | <b>4,693</b>                  | <b>3,382</b>  |         | <b>4,792</b>                              | <b>4,723</b>  |          |

Sources: SDPP baseline and follow-up student surveys and school records data collection, May 2012, November 2012, May 2013, May 2014, and November 2014.

Note: This table estimates impacts for students who were identified (or were likely to be identified) for program services via EWS. The traditional method compares impacts for students who were identified for services in SDPP schools to control group students who were matched to these students based on their propensity scores. The “likely to be identified” method compares students in both SDPP and control schools who were most likely to be identified for services based on their propensity scores.

The analysis is based on SY 2012 4th- and 5th-grade students, SY 2013 4th-grade students, and SY 2014 4th-grade students. Sample sizes are smaller for at-risk student attitudes.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects.

<sup>a</sup> Dropout is a global dropout rate that includes between-grade dropout rate measured at the beginning of SY 2015 for the SY 2013 and SY 2014 4th-grade student cohorts; and within-grade dropout at the end of SY 2013 for the SY 2012 5th-grade student cohort and SY 2014 for the SY 2012 4th grade student cohort.

<sup>b</sup> The daily attendance rate is the percentage of school days a student attended during the school year, constructed by averaging the monthly percentages for the most recent school year.

<sup>c</sup> The emotional attitudes toward school scale measures how a student feels about school, the cognitive attitudes toward school scale measures how a student thinks about school, and the behavioral attitudes toward school scale measures how a student acts toward school. We conducted a factor analysis at baseline using the iterated principal factor method to group survey items under the outcomes listed. We collected responses to the survey items on a Likert scale; each scale was constructed by taking a simple average of survey items in the scale.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

There were no impacts on attendance using either the traditional and “likely high FOI” matching approaches, a finding that is inconsistent with the main analysis for all schools presented in Figure VIII.1 of the main report. As with the main analysis presented in Figure IX.1 of the main report, there is no impact on dropout using either approach.

**TOT impacts for students identified through the EWS.** The TOT impacts differ between the traditional and “likely to be identified” methods. Using the traditional matching approach there are no impacts on student attitudes toward school. However, based on the “likely to be identified” matching approach, at-risk students in SDPP schools scored higher than similar students in control schools on behavioral attitudes toward school, and this difference was statistically significant. (Table J.9).

*Table J.9. SDPP’s quasi-experimental impacts on the primary measures of program effectiveness at endline for students identified through the EWS, by method of matching (SY 2012, SY 2013, and SY 2014)*

|   | Traditional matching approach |               |        | “Likely to be identified” matching approach |               |         |
|---|-------------------------------|---------------|--------|---|---------------|---------|
|   | SDPP Group                    | Control Group | Impact | SDPP Group                                  | Control Group | Impact  |
| <b>School Dropout</b>   |                               |               |        |   |               |         |
| Global dropout rate <sup>a</sup>  | 21.8                          | 18.2          | 3.6*** | 21.7  | 21.7          | 0.0     |
| <b>School Engagement</b>  |                               |               |        |   |               |         |
| Daily attendance rate <sup>b</sup> (January 2012-November 2012; January 2013-November 2013; January 2014-November 2014) | 77.2                          | 76.1          | 1.1    | 77.1  | 74.3          | 2.8***  |
| <b>At-Risk Student Attitudes Toward School<sup>c</sup></b>  |                               |               |        |   |               |         |
| Emotional attitudes toward school   | 1.86                          | 1.86          | 0.00   | 1.86  | 1.87          | -0.01   |
| Cognitive attitudes toward school   | 1.72                          | 1.71          | 0.01   | 1.72  | 1.72          | 0.00    |
| Behavioral attitudes toward school  | 1.80                          | 1.78          | 0.02   | 1.80  | 1.77          | 0.03*** |
| <b>Sample size</b>  |                               |               |        |   |               |         |
| <b>Schools</b>  | <b>96</b>                     | <b>94</b>     |        | <b>86</b>                                   | <b>78</b>     |         |
| <b>Students</b>   | <b>4,437</b>                  | <b>5,933</b>  |        | <b>4,430</b>                                | <b>4,309</b>  |         |

Sources: SDPP baseline and follow-up student surveys and school records data collection, May 2012, November 2012, May 2013, May 2014, and November 2014.

Note: This table estimates impacts for students who were identified (or were likely to be identified) for program services via EWS. The traditional method compares impacts for students who were identified for services in SDPP schools to control group students who were matched to these students based on their propensity scores. The “likely to be identified” method compares students in both SDPP and control schools who were most likely to be identified for services based on their propensity scores.

The analysis is based on SY 2012 4th- and 5th-grade students and SY 2013 4th-grade students. Sample sizes are smaller for at-risk student attitudes.

Differences between SDPP and control group means were tested using two-tailed t-tests. Mean values are adjusted for baseline characteristics. The analysis accounts for clustering of students within schools and cohort fixed effects.

<sup>a</sup> Dropout is a global dropout rate that includes between-grade dropout rate measured at the beginning of SY 2015 for the SY 2013 and SY 2014 4th-grade student cohorts; and within-grade dropout at the end of SY 2013 for the SY 2012 5th-grade student cohort and SY 2014 for the SY 2012 4th grade student cohort.

<sup>b</sup> The daily attendance rate is the percentage of school days a student attended during the school year, constructed by averaging the monthly percentages for the most recent school year.

<sup>c</sup> The emotional attitudes toward school scale measures how a student feels about school, the cognitive attitudes toward school scale measures how a student thinks about school, and the behavioral attitudes toward school scale measures how a student acts toward school. We conducted a factor analysis at baseline using the iterated principal factor method to group survey items under the outcomes listed. We collected responses to the survey items on a Likert scale; each scale was constructed by taking a simple average of survey items in the scale.

\*\*\*/\*\*/\* Impact estimate is statistically significant at the .01/.05/.10 level.

Similarly, there was an impact on attendance using the “likely to be identified” matching approach, but not the traditional matching approach. In the “likely to be identified” matching sample, attendance rates were 77.1 percent and 74.3 percent in SDPP and control schools, respectively; this difference was statistically significant.

Using the traditional matching approach, 21.8 percent of students in SDPP schools who were identified through the EWS dropped out of school compared to 18.2 percent of matched students in control schools, and this difference was statistically significant. However, the TOT estimates using the “likely to be identified” method reveal no statistically significant differences in dropout between the two groups. Overall, because findings from the traditional and “likely to be identified” methods differ, we cannot be confident that the findings from this analysis reflect the program’s true impact on students identified to receive services (Schochet, Peter Z., and John Burghardt 2007).<sup>43</sup> The TOT analysis does not provide additional insight into the SDPP Program’s impacts on students identified to receive services.

---

<sup>43</sup> An additional factor that reduces confidence in the findings using the TOT estimates is that the prediction rate for the EWS identification propensity score model is very low.

**APPENDIX K**  
**INSTRUMENTS**

**SDPP 2012 BASELINE SCHOOL QUESTIONNAIRE – TIMOR-LESTE**

DISTRICT  SCHOOL ID

| <b>A. SCHOOL IDENTIFICATION</b> |   |                        |  |
|---------------------------------|---|------------------------|--|
| District:                       | <i>Circle one only</i><br>Bobonaro ..... 1<br>Ermera ..... 2<br>Liquica ..... 3<br>Manatuto ..... 4<br>Viqueque ..... 5 | School ID:             | <input type="text"/>   |
| Director Phone:                 | <input type="text"/>  | Director Email:        | <input type="text"/>   |
| Name of Respondent:             | <input type="text"/>  | Position of Respondent | <i>Circle one only</i><br>Director ..... 1<br>Deputy Director ..... 2<br>Other (specify) _____ ...88 |

| <b>B. DATA COLLECTION INFORMATION</b> |  |                      |                      |
|---------------------------------------|--|----------------------|----------------------|
| Data Collector ID:                    | <input type="text"/>   | Data Collector Name: | <input type="text"/> |
| Date of Visit:                        | <input type="text"/> / <input type="text"/> / <input type="text"/><br>DD      MM      YYYY |                      |                      |

| <b>C. INFORMED CONSENT</b> |   |   |
|----------------------------|---|---|
| C1.                        | <p><b>Hello, my name is _____, and I am working with CARE and Creative Associates International on the School Dropout Prevention Project funded by USAID. Your school has agreed to participate in an evaluation of SDPP, in order to assess the program’s effects on students’ school enrollment, attendance and performance in grades 3, 4, 5 and 6. We would like to ask you to provide some basic information about the school, to interview some of the 4th, 5th and 6th grade teachers, and review school records to collect data for this evaluation.</b></p> <p><b>Do you have any questions for me now?</b></p> <p><i>ANSWER QUESTIONS AS COMPLETELY AS POSSIBLE AND PROCEED.</i></p> <p><b>Do you agree to participate in this interview?</b></p> | YES<br>.....<br>1<br>NO<br>.....<br>0       |
| C2.                        | INTERVIEW START TIME:<br><i>RECORD USING 24 HOUR TIME</i>   | <input type="text"/> : <input type="text"/> |
| C3.                        | INTERVIEW END TIME:<br><i>RECORD USING 24 HOUR TIME</i>   | <input type="text"/> : <input type="text"/> |

**SDPP 2012 BASELINE SCHOOL QUESTIONNAIRE – TIMOR-LESTE**

DISTRICT  SCHOOL ID

| <b>D. SCHOOL INFORMATION</b> |  |   |                                       |
|------------------------------|--|---|---------------------------------------|
| D1.                          | Grades offered in school   | a. <input type="text"/> THROUGH <input type="text"/> b. <input type="text"/>  |                                       |
| D2.                          | What time does school start and end?<br>If you have multiple shifts, please give start and end times for each shift.<br><br><i>RECORD START AND END TIMES IN 24 HOUR TIME.</i> | a. Morning <input type="text"/> : <input type="text"/> TO <input type="text"/> : <input type="text"/><br>b. Afternoon <input type="text"/> : <input type="text"/> TO <input type="text"/> : <input type="text"/><br>c. Other <input type="text"/> : <input type="text"/> TO <input type="text"/> : <input type="text"/> |                                       |
| D3.                          | Please record the total number of teachers in the school.  | a. <input type="text"/> MALE    b. <input type="text"/> FEMALE  |                                       |
| D4.                          | Does the school have.....  | <b>Yes</b>  | <b>No</b>                             |
|                              | a. Electricity   | 1   | 0                                     |
|                              | b. Indoor plumbing   | 1   | 0                                     |
|                              | c. Security (wall, guard, fence)   | 1   | 0                                     |
|                              | d. Office for director/teachers  | 1   | 0                                     |
|                              | e. Playground  | 1   | 0                                     |
| D5.                          | School accessible by...  | <i>Circle one only</i>  |                                       |
|                              | READ ALL RESPONSE OPTIONS.   | All types of vehicle ..... 1<br>Only truck ..... 2<br>Motorbike ..... 3<br>No road access ..... 4   |                                       |
| D6.                          | Number of classrooms in school used for instructional purposes   | <input type="text"/>  |                                       |
| D7.                          | Number of Functioning Toilets  | a. <input type="text"/> BOYS ONLY<br>b. <input type="text"/> GIRLS ONLY<br>c. <input type="text"/> BOTH BOYS AND GIRLS<br>d. <input type="text"/> STAFF   |                                       |
| D8.                          | Number of days school was open in each month of the 2012 School Year.  | a. <input type="text"/> JANUARY 2012  | b. <input type="text"/> FEBRUARY 2012 |
| D9                           | Number of Classes in Grades 3, 4, 5 and 6  | a. <input type="text"/> GRADE 3   | b. <input type="text"/> GRADE 4       |
|                              |  | c. <input type="text"/> GRADE 5   | d. <input type="text"/> GRADE 6       |

**SDPP 2012 BASELINE SCHOOL QUESTIONNAIRE – TIMOR-LESTE**

DISTRICT  SCHOOL ID

| <b>E. TEACHER INFORMATION</b>  |                                  |                      |  |                                  |   |  |                      |                      |
|--|----------------------------------|----------------------|--|----------------------------------|---|--|----------------------|----------------------|
| Please record the names of the director, the deputy director, and all teachers (of all grades) in the school in column A below. Then complete items E2 through E8 for each person named. |                                  |                      |  |                                  |   |  |                      |                      |
|  | Name                             | Sex                  | Position   | Highest qualification            | Grades currently teaching                                   | Absences Trimestre 1 SY 2012<br>(USING THE ATTENDANCE LIST)<br>Teachers teaching grades 4, 5, or 6 |                      |                      |
|  |                                  |                      |  |                                  |   | January  | February             | March                |
|  | RECORD TEACHER'S FULL NAME HERE. | M=1<br>F=2           | 1= Director<br>2= Deputy Director<br>3=Classroom teacher | ENTER CODE<br>SEE CODES<br>BELOW | IF GRADES 4, 5, OR 6<br>ARE NOT MARKED,<br>SKIP TO NEXT ROW |  |                      |                      |
|  | E1                               | E2                   | E3   | E4                               | E5  | E6   | E7                   | E8                   |
| 01.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 02.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 03.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 04.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 05.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 06.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 07.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 08.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 09.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |

- QUALIFICATION CODES**
1. Primary school education
  2. Pre-secondary/ lower secondary
  3. Upper secondary
  4. Polytechnic diploma
  5. Vocational education

6. Teacher training institute /college (SPG)
7. Bacharelato
8. Advanced teacher training /pedagogical institute
9. Associate degree
10. Bachelor's degree
11. Graduate degree

**SDPP 2012 BASELINE SCHOOL QUESTIONNAIRE – TIMOR-LESTE**

DISTRICT  SCHOOL ID

| <b>E. TEACHER INFORMATION</b>  |                                  |                      |  |                                  |   |  |                      |                      |
|--|----------------------------------|----------------------|--|----------------------------------|---|--|----------------------|----------------------|
| Please record the names of the director, the deputy director, and all teachers (of all grades) in the school in column A below. Then complete items E2 through E8 for each person named. |                                  |                      |  |                                  |   |  |                      |                      |
|  | Name                             | Sex                  | Position   | Highest qualification            | Grades currently teaching                                   | Absences Trimestre 1 SY 2012<br>(USING THE ATTENDANCE LIST)<br>Teachers teaching grades 4, 5, or 6 |                      |                      |
|  |                                  |                      |  |                                  |   | January  | February             | March                |
|  | RECORD TEACHER'S FULL NAME HERE. | M=1<br>F=2           | 1= Director<br>2= Deputy Director<br>3=Classroom teacher | ENTER CODE<br>SEE CODES<br>BELOW | IF GRADES 4, 5, OR 6<br>ARE NOT MARKED,<br>SKIP TO NEXT ROW |  |                      |                      |
|  | E1                               | E2                   | E3   | E4                               | E5  | E6   | E7                   | E8                   |
| 10.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 11.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 12.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 13.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 14.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 15.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 16.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 17.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| 18.  |                                  | <input type="text"/> | <input type="text"/>                                     | <input type="text"/>             |   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |

**QUALIFICATION CODES**

1. Primary school education
2. Pre-secondary/ lower secondary
3. Upper secondary
4. Polytechnic diploma
5. Vocational education

6. Teacher training institute /college (SPG)
7. Bacharelato
8. Advanced teacher training /pedagogical institute
9. Associate degree
10. Bachelor's degree
11. Graduate degree

**SDPP 2012 BASELINE ENROLLMENTS/TRANSFERS INSTRUMENT – TIMOR LESTE**

DISTRICT  SCHOOL ID

| <b>F. OTHER PROGRAMS/INTERVENTIONS</b>   |  |   |
|--|--|---|
| <p><b>Please tell me about any programs or interventions that are currently active in this school.</b></p> | <p><b>Type of programs</b></p> <p>School feeding ..... 1<br/>                     Healthy/hygiene ..... 2<br/>                     English classes ..... 3<br/>                     Enrichment/clubs..... 4<br/>                     Recreation/sports ..... 5<br/>                     Teacher training ..... 6<br/>                     Provision of materials.. 7<br/>                     Infrastructure ..... 8<br/>                     Other (specify) ..... 88</p> | <p><b>Year and Month program started working in this school</b></p> |
| F1   | F2   | F3  |
| a. _____<br>-  | <input type="text"/>   | _ _ _ / _ _ _ _ _ <br>MONTH YEAR                                    |
| b. _____<br>-  | <input type="text"/>   | _ _ _ / _ _ _ _ _ <br>MONTH YEAR                                    |
| c. _____<br>-  | <input type="text"/>   | _ _ _ / _ _ _ _ _ <br>MONTH YEAR                                    |

| <b>G. HEAD COUNT</b>  |         |         |         |         |
|---|---------|---------|---------|---------|
| <p>Ask the school director for permission to conduct a brief count of students in the target grades who are currently in class. He/she may accompany you to show you to the correct classrooms. Do not disturb the class activities, but simply enter the room and silently count the number of students present. Record total students present by class. If there is only one class per grade, fill in only Class A with counts, and record N in all other classes. Record N if the class listed does not exist in the school.</p> |         |         |         |         |
| Class   | Grade 3 | Grade 4 | Grade 5 | Grade 6 |
|   | H1      | H2      | H3      | H4      |
| A   |         |         |         |         |
| B   |         |         |         |         |
| C   |         |         |         |         |
| D   |         |         |         |         |
| E   |         |         |         |         |



**SDPP 2012 BASELINE ENROLLMENTS/TRANSFERS INSTRUMENT – TIMOR LESTE**

DISTRICT  SCHOOL ID

| <b>I. ENROLLMENT INFORMATION FOR 2012<br/>SCHOOL YEAR</b>   |                      |                      |
|---|----------------------|----------------------|
| Please count the number of students enrolled in each grade in the school at the start of the current (2012) school year by class from the <u>February 2012</u> attendance list. If there is only one class per grade, fill in only Class A with counts, and record LA in all other classes. Record LA if the class listed does not exist in the school. |                      |                      |
| Class/Turma   | Grade 1              | Grade 2              |
|   | I1                   | I2                   |
| A   | <input type="text"/> | <input type="text"/> |
| B   | <input type="text"/> | <input type="text"/> |
| C   | <input type="text"/> | <input type="text"/> |
| D   | <input type="text"/> | <input type="text"/> |
| E   | <input type="text"/> | <input type="text"/> |



**SDPP 2013 MIDLINE TEACHER QUESTIONNAIRE – TIMOR LESTE**

DISTRICT |\_\_|

SCHOOL NUMBER |\_\_|\_|\_|\_|\_|

TEACHER SDPP ID |\_\_|\_|

**THIS SECTION TO BE COMPLETED BY DATA COLLECTOR ONLY.**

|                 |   |
|-----------------|---|
| DISTRICT        | <p><i>Mark one only</i></p> <p>1 <input type="checkbox"/> Bobonaro</p> <p>2 <input type="checkbox"/> Ermera</p> <p>3 <input type="checkbox"/> Liquica</p> <p>4 <input type="checkbox"/> Manatuto</p> <p>5 <input type="checkbox"/> Viqueque</p>   |
| SCHOOL NUMBER   | _ _ _ _   |
| TEACHER SDPP ID | <p> _ _ _ </p> <p>(ENTER THE TEACHER'S LINE NUMBER FROM<br/>TEACHER LISTING HERE)</p>   |
| RESULT CODE     | <p><i>Mark one only</i></p> <p>1 <input type="checkbox"/> Interview complete</p> <p>2 <input type="checkbox"/> Teacher refused</p> <p>3 <input type="checkbox"/> Teacher not available</p> <p>4 <input type="checkbox"/> Teacher not eligible</p> <p>5 <input type="checkbox"/> Other (specify)</p> |

**A. CONSENT**

Hello, I am \_\_\_\_\_, and am working with CARE and Creative Associates International on the School Dropout Prevention Pilot Project. We are conducting a study about students dropping out of school. As part of this study, we would like to interview you about your beliefs and practices as an educator. If you agree to participate in the survey, all the answers that you provide will be kept private – only members of the survey team would have access to this information. You would be free to choose not to answer any question that you would prefer not to answer. You can stop the interview at any time, ask me to clarify any question, or ask me to repeat something if you don't understand. You may also choose to withdraw from the survey at any time. This survey being administered to all current 4th, 5th, 6th grade homeroom, math, & language teachers and the director and deputy director.

Do you have any questions for me now?

Do you agree to participate in the survey?

1  Yes

0  No

**SDPP 2013 MIDLINE TEACHER QUESTIONNAIRE – TIMOR LESTE**

DISTRICT |\_\_|

SCHOOL NUMBER |\_\_|\_\_|\_\_|\_\_|

TEACHER SDPP ID |\_\_|\_\_|

| <b>B. TEACHER INFORMATION</b> |  |  |
|-------------------------------|--|--|
| B1.                           | What is your name?   | _____  |
| B2.                           | How old are you?   | __ __  YEARS   |
| B3.                           | Are you male or female?  | <i>Mark one only</i><br>1 <input type="checkbox"/> Male<br>2 <input type="checkbox"/> Female   |
| B4.                           | What is your position?   | <i>Mark all that apply</i><br>1 <input type="checkbox"/> Director / Coordinator<br>2 <input type="checkbox"/> Deputy director / Deputy Coordinator<br>3 <input type="checkbox"/> Teacher                                   |
| B5.                           | What subjects are you currently teaching in grades 4, 5, and 6?  | <i>Mark all that apply</i><br>1. <input type="checkbox"/> Math<br>2. <input type="checkbox"/> Tetun<br>3. <input type="checkbox"/> Portuguese<br>4. <input type="checkbox"/> Homeroom<br>5. <input type="checkbox"/> Other |
| B6.                           | Are you a full time employee, contract or volunteer employee?  | <i>Mark one only</i><br>1 <input type="checkbox"/> Full time employee<br>2 <input type="checkbox"/> Contract employee<br>3 <input type="checkbox"/> Volunteer  |
| B7.                           | How many years of <b>teaching experience</b> do you have at <u>this school</u> ?   | __ __  YEARS   |
| B8.                           | How many years of <b>teaching experience</b> do you have <u>in total</u> – in any school?  | __ __  YEARS   |
| B9.                           | If you are a director / coordinator or a deputy director, have many <b>years of experience</b> do you have? PLEASE COUNT THE YEARS IN THE AREA OF ADMINISTRATION. IF YOU ARE NOT A DIRECTOR OR DEPUTY DIRECTOR, MARK 'LA'. | __ __  YEARS   |

**SDPP 2013 MIDLINE TEACHER QUESTIONNAIRE – TIMOR LESTE**

DISTRICT |\_\_|

SCHOOL NUMBER |\_\_|\_\_|\_\_|\_\_|

TEACHER SDPP ID |\_\_|\_\_|

|  |   |  |
|--|---|--|
| B10  | What is the highest level of education you have completed?  | <p><i>Mark one only</i></p> <p>1. <input type="checkbox"/> Primary school education</p> <p>2. <input type="checkbox"/> Pre-secondary/lower secondary</p> <p>3. <input type="checkbox"/> Upper secondary</p> <p>4. <input type="checkbox"/> Polytechnic diploma</p> <p>5. <input type="checkbox"/> Vocational education</p> <p>6. <input type="checkbox"/> Teacher training institute/college (SPG)</p> <p>7. <input type="checkbox"/> Bacharelato</p> <p>8. <input type="checkbox"/> Advanced teacher training/pedagogical institute</p> <p>9. <input type="checkbox"/> Associate degree</p> <p>10. <input type="checkbox"/> Bachelor's degree</p> <p>11. <input type="checkbox"/> Graduate degree</p> <p>12. <input type="checkbox"/> Other (specify)</p> |
| B11  | Do you have any formal teaching certification?  | <p><i>Mark one only</i></p> <p>1 <input type="checkbox"/> Yes</p> <p>0 <input type="checkbox"/> No</p>   |
| B12  | Have you received any professional development training to help you identify and support students who are <b>at risk of dropping out of school?</b> (If 'No', go to C1.)    | <p>1 <input type="checkbox"/> Yes</p> <p>0 <input type="checkbox"/> No</p>   |
| B13  | If yes, when was the last time you received professional development training to help you identify and support students who are <b>at risk of dropping out of school?</b>   | <p><i>Mark one only</i></p> <p>1 <input type="checkbox"/> Within the past year</p> <p>2 <input type="checkbox"/> Between 1 and 2 years ago</p> <p>3 <input type="checkbox"/> Between 2 and 3 years ago</p> <p>4 <input type="checkbox"/> More than 3 years ago</p>   |
| <b>C. TEACHER UNDERSTANDING OF STUDENTS AT RISK OF DROPOUT</b> |   |  |
| C1   | How many days or months must a student be absent during the school year at this school before they are considered a dropout (or struck from the school enrolment register)? | <p><i>Mark one only</i></p> <p>1. <input type="checkbox"/> 15 days or two weeks</p> <p>2. <input type="checkbox"/> 15- 30 days</p> <p>3. <input type="checkbox"/> 31-60 days</p> <p>4. <input type="checkbox"/> 61-90 days</p> <p>5. <input type="checkbox"/> 91-120 days</p> <p>6. <input type="checkbox"/> 121 days or more</p> <p>7. <input type="checkbox"/> they are not considered a dropout during the school year</p>  |

**SDPP 2013 MIDLINE TEACHER QUESTIONNAIRE – TIMOR LESTE**

DISTRICT |\_\_|

SCHOOL NUMBER |\_\_|\_|\_|\_|\_|

TEACHER SDPP ID |\_\_|\_|\_|

|    |  |   |
|----|--|---|
| C2 | How many days per month do you think is an excessive amount of student absenteeism?                                | <i>Mark one only</i><br>1. <input type="checkbox"/> 1-2 absences a month<br>2. <input type="checkbox"/> 3-5 absences a month<br>3. <input type="checkbox"/> 6-8 absences a month<br>4. <input type="checkbox"/> 9+ absences a month |
| C3 | For each statement below, mark whether you believe the statement is true, or false.                                | MARK ONE RESPONSE FOR EACH ITEM   |
|    | a. Students who misbehave in class are at risk of dropping out of school   | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |
|    | b. Student who are easily influenced by their friends are at risk of dropping out of school.                       | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |
|    | c. Students who do not socialize with other students are at risk of dropping out of school                         | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |
|    | d. Students who perform poorly on exams and/or coursework are at risk of dropping out of school.                   | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |
|    | e. Students who seldom turn in their homework are at risk of dropping out of school.                               | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |
|    | f. Students who are frequently absent or late to school are at risk of dropping out of school                      | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |
|    | g. Students who do not participate in classroom activities or discussions are at risk of dropping out of school.   | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |
|    | h. Students who are disrespectful to school personnel and/or other students are at risk of dropping out of school. | 1 <input type="checkbox"/> True<br>0 <input type="checkbox"/> False   |

**D. TEACHER ATTITUDES TOWARDS AT-RISK STUDENTS**

| D1 | Do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following statements:<br>READ EACH STATEMENT AND MARK ONE RESPONSE FOR EACH | STRONGLY DISAGREE           | SOMEWHAT DISAGREE           | SOMEWHAT AGREE              | STRONGLY AGREE              |
|----|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|    | a. Students at-risk of dropping out of school should work harder.  | 1. <input type="checkbox"/> | 2. <input type="checkbox"/> | 3. <input type="checkbox"/> | 4. <input type="checkbox"/> |
|    | b. There is little that can be done by the teacher or school to help students who are at-risk of dropping out of school.   | 1. <input type="checkbox"/> | 2. <input type="checkbox"/> | 3. <input type="checkbox"/> | 4. <input type="checkbox"/> |
|    | c. If a student is at risk of dropping out, it is mainly the fault of the parent/guardian or family.   | 1. <input type="checkbox"/> | 2. <input type="checkbox"/> | 3. <input type="checkbox"/> | 4. <input type="checkbox"/> |
|    | d. At-risk students face too many challenges to succeed in school.   | 1. <input type="checkbox"/> | 2. <input type="checkbox"/> | 3. <input type="checkbox"/> | 4. <input type="checkbox"/> |
|    | e. At-risk students need more help than teachers have time or resources to provide.  | 1. <input type="checkbox"/> | 2. <input type="checkbox"/> | 3. <input type="checkbox"/> | 4. <input type="checkbox"/> |

**SDPP 2013 MIDLINE TEACHER QUESTIONNAIRE – TIMOR LESTE**

DISTRICT |\_\_|

SCHOOL NUMBER |\_\_|\_\_|\_\_|\_\_|

TEACHER SDPP ID |\_\_|\_\_|

| D2 | Please indicate your opinion about each of the statements below using the provided scale. <i>CIRCLE ONLY ONE NUMBER FOR EACH QUESTION.</i> | HOW MUCH CAN YOU DO? |             |                |             |              |
|----|--|----------------------|-------------|----------------|-------------|--------------|
|    |  | Nothing              | Very Little | Some Influence | Quite a Bit | A Great Deal |
|    | a. How much can you do to control disruptive behavior in the classroom?  | 1                    | 2           | 3              | 4           | 5            |
|    | b. How much can you do to motivate students who show low interest in school work?  | 1                    | 2           | 3              | 4           | 5            |
|    | c. How much can you do to get students to believe they are capable of doing well and succeeding in school?                                 | 1                    | 2           | 3              | 4           | 5            |
|    | d. How much can you do to help your students value learning?   | 1                    | 2           | 3              | 4           | 5            |
|    | e. To what extent can you make your lessons interesting for your students?   | 1                    | 2           | 3              | 4           | 5            |
|    | f. How much can you do to get children to follow classroom rules?  | 1                    | 2           | 3              | 4           | 5            |
|    | g. How much can you do to encourage active participation of students who are not engaged in class activities?                              | 1                    | 2           | 3              | 4           | 5            |
|    | h. To what extent can you use data available at the school to identify students who need extra support and help?                           | 1                    | 2           | 3              | 4           | 5            |
|    | i. To what extent can you modify your teaching and learning activities to help weak or poorly performing students?                         | 1                    | 2           | 3              | 4           | 5            |
|    | j. How much can you assist families in helping their children do well in school?   | 1                    | 2           | 3              | 4           | 5            |
|    | k. How much can you do to improve students' attendance?  | 1                    | 2           | 3              | 4           | 5            |
|    | l. To what extent can you help poor performing students do better in school?   | 1                    | 2           | 3              | 4           | 5            |

**E. TEACHER PRACTICES TOWARDS AT-RISK STUDENTS**

|    |   |   |
|----|---|---|
| E1 | Do you regularly record (i.e. write down) daily attendance of students in your class(es)?         | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No |
| E2 | Do you regularly take any action after students have been absent for more than 3 days in a month? | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No |
| E3 | Do you regularly give your weak students' individual feedback on their work or assignments?       | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No |

**SDPP 2013 MIDLINE TEACHER QUESTIONNAIRE – TIMOR LESTE**

DISTRICT |\_\_|

SCHOOL NUMBER |\_\_|\_\_|\_\_|\_\_|

TEACHER SDPP ID |\_\_|\_\_|

|     |  |   |
|-----|--|---|
| E4  | Do you regularly meet with other teachers to discuss how to support your weak students?  | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No   |
| E5  | Do you develop a plan to support weak students?  | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No   |
| E6  | Do you regularly communicate with parent/guardians of weak student about their child's schooling?  | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No   |
| E7  | Do you regularly meet with weak students to understand their problems?   | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No   |
| E8  | If you have contacted any student's parents in the past month regarding the student's attendance, performance, or misbehavior, write the number of times you have contacted students' parents for each reason of contact. IF NO CONTACT WAS MADE WRITE "00". | <i>FILL ALL THAT APPLY</i><br>a.  __ __  ABOUT ATTENDANCE<br>b.  __ __  ABOUT PERFORMANCE<br>c.  __ __  ABOUT MISBEHAVIOR |
| E9  | In the past month, how many times have you spoken with students at school about their attendance, performance, or misbehavior? IF YOU HAVE NOT SPOKEN WITH THE STUDENTS WRITE "00".  | <i>FILL ALL THAT APPLY</i><br>a.  __ __  ABOUT ATTENDANCE<br>b.  __ __  ABOUT PERFORMANCE<br>c.  __ __  ABOUT MISBEHAVIOR |
| E10 | For Teachers, in the past month, how many times have you spoken to the school director or deputy director about a student's attendance, performance, or misbehavior issues?  | __ __   |
| E11 | In the past month, how many times have you spoken to other teachers about a student's attendance, performance, or misbehavior issues?  | __ __   |
| E12 | Are you willing to come early or stay late at school to help a student who is not performing well?   | 1 <input type="checkbox"/> Yes<br>0 <input type="checkbox"/> No   |

**THANK YOU SO MUCH FOR YOUR HELP. YOUR ANSWERS ARE VERY HELPFUL TO US.**

District [ ]

School [ ][ ]

SDPP ID [ ][ ][ ][ ]

SDPP 2014 FOLLOW-UP 3 STUDENT QUESTIONNAIRE – TIMOR LESTE

## Student Questionnaire

Your school is participating in a study about helping students stay in school. As part of this study, we would like to ask you some questions about your opinions about school. If you agree to participate in the survey, we will not share your answers with your teachers or parents or anyone else. Please ask questions if there is something you don't understand. You may also choose to withdraw from the survey at any time. The information you give us will help us understand what students like you need to be happy and do well in school.

### Do you agree to participate in the survey?

1  Yes

0  No

| THIS BOX TO BE COMPLETED BY DATA COLLECTOR   |  |
|--|--|
| DATE OF INTERVIEW:<br><br>[ ][ ]/[ ][ ]/[ ][ ][ ][ ]<br><br>Day      Month      Year | RESULT CODE<br><br>1 <input type="checkbox"/> Interview completed in school in a group<br>2 <input type="checkbox"/> Interview completed in school individually<br>3 <input type="checkbox"/> Interview completed at home, enrolled<br>4 <input type="checkbox"/> Interview completed at home, not enrolled<br>5 <input type="checkbox"/> Student refused to participate<br>6 <input type="checkbox"/> Student not available to participate<br>7 <input type="checkbox"/> Other (specify)<br>_____ |

1. How old are you?

[ ][ ] YEARS OLD

2. Your sex is...

1  Male

2  Female

District [ ]

School [ ][ ]

SDPP ID [ ][ ][ ][ ]

SDPP 2014 FOLLOW-UP 3 STUDENT QUESTIONNAIRE – TIMOR LESTE

**3. What is the main language spoken in your home?**

MARK ONE ONLY

- 1  Bunak
  - 2  Galolen
  - 3  Habun
  - 4  Idate
  - 5  Isni
  - 6  Kairui
  - 7  Makasae
  - 8  Mambae
  - 9  Mdiki
  - 10  Naueti
  - 11  Tetum Terik
  - 12  Tokodede
  - 13  Tetum
  - 14  Seluk (*esplika took*)
- 

**4. What grade are you currently enrolled in?**

[ ] GRADE

**5. What is the highest education level your mother has completed?**

MARK ONE ONLY

- 0  No schooling
- 1  Primary school during Portuguese colonization (up to Grade 4)
- 2  Did not finish primary school (SD) (did not finish Grade 6)
- 3  Primary school (SD) (completed Grade 6)
- 4  Pre-secondary school (Grades 7-9)
- 5  Secondary school (Grades 10-12)
- 7  Other (*specify*) \_\_\_\_\_
- 8  Don't know
- 9.  Attended literacy classes

MARK ONE RESPONSE FOR EACH STATEMENT

| SELECT ONE RESPONSE PER ROW         | AGREE   | DISAGREE   |
|-------------------------------------|---|--|
| a. I like to play with friends..... | 1<br> | 2<br> |
| b. I don't like to eat sweets.....  | 1<br> | 2<br> |
| c. I like to play in the rain ..... | 1<br> | 2<br> |

6. You will read some statements. Please think about how these statements apply to you. Do you agree or disagree with the following statements about yourself?

MARK ONE RESPONSE FOR EACH STATEMENT

| SELECT ONE RESPONSE PER ROW  | AGREE   | DISAGREE   |
|--|---|--|
| a. I have thought about dropping out of school.....                    | 1<br> | 2<br> |
| b. I will complete the grade I'm in.....                               | 1<br> | 2<br> |
| c. Completing the grade I'm in will be useful to me and my family..... | 1<br> | 2<br> |
| d. I attend school regularly.....                                      | 1<br> | 2<br> |
| e. I reach school on time.....   | 1<br> | 2<br> |
| f. I stay home from school even if I am not sick.....                  | 1<br> | 2<br> |

District [ ]

School [ ][ ]

SDPP ID [ ][ ][ ][ ]

SDPP 2014 FOLLOW-UP 3 STUDENT QUESTIONNAIRE – TIMOR LESTE

|  |  |   |
|--|--|---|
| g. I skip classes during school .....                              | 1    | 2    |
| h. I skip school or miss classes without telling my parents.....   | 1    | 2    |
| i. Missing school affects my performance in school .....           | 1    | 2    |
| j. I do the homework the teacher assigned to me.....               | 1    | 2    |
| k. Doing homework helps me do well in school.....                  | 1    | 2    |
| l. I am interested in the work I get to do in my classes .....     | 1    | 2    |
| m. I check my school work (homework, exercises) for mistakes ..... | 1  | 2  |
| n. I need extra help with my studies or homework.....              | 1  | 2  |
| o. I have difficulty paying attention in school .....              | 1  | 2  |
| p. I follow the rules at school.....                               | 1  | 2  |
| q. I get in trouble at school.....                                 | 1  | 2  |
| r. I have difficulty getting along with other students .....       | 1  | 2  |
| s. I try to do my best at school, even if it is not perfect.....   | 1  | 2  |
| t. I participate in extracurricular activities at school .....     | 1  | 2  |

District [ ]

School [ ][ ]

SDPP ID [ ][ ][ ][ ]

SDPP 2014 FOLLOW-UP 3 STUDENT QUESTIONNAIRE – TIMOR LESTE

7. You will read some statements. Please think about how these statements apply to you. Do you agree or disagree with the following statements about your school?

MARK ONE RESPONSE FOR EACH STATEMENT

| SELECT ONE RESPONSE PER ROW   | AGREE  | DISAGREE  |
|---|--|---|
| a. There is a teacher at the school that I can talk to about my problems..... | 1    | 2    |
| b. My school is a fun place to be .....                                       | 1    | 2    |
| c. I participate in school activities after school .....                      | 1    | 2    |
| d. I enjoy participating in class activities .....                            | 1    | 2    |
| e. I look forward to going to school.....                                     | 1  | 2  |
| f. Extracurricular activities would help me with my studies .....             | 1  | 2  |

**8. You will read some statements. Please think about how these statements apply to you. Do you agree or disagree with the following statements about your teachers?**

MARK ONE RESPONSE FOR EACH STATEMENT

| SELECT ONE RESPONSE PER ROW   | AGREE   | DISAGREE   |
|---|---|--|
| a. I have had difficulty getting along with my teacher(s) .....               | 1<br>   | 2<br>   |
| b. My teacher(s) care about how I'm doing .....                               | 1<br>   | 2<br>   |
| c. My teacher(s) talk to me about how I did on my homework and/or exams ..... | 1<br>   | 2<br>   |
| d. My teacher(s) help me if I am having problems with a lesson ..             | 1<br>   | 2<br>   |
| e. I feel comfortable asking my teacher(s) for help with my lessons.....      | 1<br> | 2<br> |
| f. My teacher(s) talk(s) to me if I miss school or class .....                | 1<br> | 2<br> |
| g. My teacher(s) think(s) I am capable of completing this grade...            | 1<br> | 2<br> |
| h. My teacher(s) have talked to me about my future plans .....                | 1<br> | 2<br> |
| i. My teacher(s) have contacted my parents about my school work .....         | 1<br> | 2<br> |
| j. My teacher(s) have contacted my parents about my attendance.....           | 1<br> | 2<br> |
| k My teacher(s) encourage me and my classmates not to drop out .....          | 1<br> | 2<br> |

**9. You will read some statements. Please think about how these statements apply to you. Do you agree or disagree with the following statements about your parents?**

MARK ONE RESPONSE FOR EACH STATEMENT

| SELECT ONE RESPONSE PER ROW  | AGREE  | DISAGREE  |
|--|--|---|
| a. My parents know when I have not completed my homework and assignments .....   | 1    | 2    |
| b. My parents have talked with my teacher about my exam scores or absences ..... | 1    | 2    |
| c. My parents have talked with my teacher about my attendance .....              | 1    | 2    |
| d. My parents make sure I go to school every day .....                           | 1   | 2   |
| e. It is important to my parents that I do well in school .....                  | 1  | 2  |
| f. My parents attend school events .....   | 1  | 2  |
| g. My parents talk to me about improving my grades .....                         | 1  | 2  |
| h. My parents try to support me with my studies .....                            | 1  | 2  |
| i. My parents free up my time for school work .....                              | 1  | 2  |
| j. My parents want me to complete this grade .....                               | 1  | 2  |
| k. If I miss school, a community member visits my parents .....                  | 1  | 2  |

District [ ]

School [ ][ ]

SDPP ID [ ][ ][ ][ ]

SDPP 2014 FOLLOW-UP 3 STUDENT QUESTIONNAIRE – TIMOR LESTE

**10. What do you plan to do with your schooling next academic year?**

MARK ALL THAT APPLY

- 1  Continue to the following grade
- 2  Repeat this grade
- 3  Begin vocational training
- 4  Find a job/work to earn money
- 5  Get married
- 6  Not sure yet

**THANK YOU SO MUCH FOR YOUR HELP. YOUR ANSWERS ARE VERY HELPFUL TO US.**

**RECORDS EXTRACTION FORM: NEW STUDENTS WHO ENROLLED IN SY 2014**

| RA. DATA COLLECTION INFORMATION   |                  |
|---|------------------|
| Enumerator ID:  __ _ __ _ __ _ __ _ __ _ __                             | Enumerator Name: |
| Date Completed:  __ _ __ _ / __ _ __ _ / __ _ __ _ _ <br>DD / MM / YYYY |                  |

|   |      |
|---|------|
| QA CHECK<br>RECORD TOTAL NUMBER OF STUDENTS LISTED IN THIS RECORDS EXTRACTION FORM AFTER IT IS COMPLETED. | __ _ |
|---|------|

|                     |
|---------------------|
| <b><u>NOTES</u></b> |
|---------------------|

| RB. BACKGROUND INFORMATION FOR STUDENTS NEW TO THE SDPP SAMPLE |           |       |               |              |         |                                |                                 |                                  |     |                                   | RC. PERFORMANCE AND BEHAVIOR FOR 2013 |          |            |               |      |          |            |       | 2014 ENROLLMENT STATUS |          |  |             |       |       |
|--|-----------|-------|---------------|--------------|---------|--------------------------------|---------------------------------|----------------------------------|-----|-----------------------------------|---------------------------------------|----------|------------|---------------|------|----------|------------|-------|------------------------|----------|--|-------------|-------|-------|
| SDPP ID  |           |       |               | Student Name | EMIS ID | Sex<br>Male.....1<br>Female .2 | Date of Birth<br>DD / MM / YYYY | a. Father Name<br>b. Mother Name |     | Performance and Behavior for 2013 |                                       |          |            |               |      |          |            |       |                        |          |  | STATUS CODE | GRADE | CLASS |
| Grade  | Serial N. | Class | 1st Trimester |              |         |                                |                                 |                                  |     | 2nd Trimester                     |                                       |          |            | 3rd Trimester |      |          |            |       |                        |          |  |             |       |       |
|  |           |       | Portuguese    |              |         |                                |                                 |                                  |     | Tetum                             | Math                                  | Behavior | Portuguese | Tetum         | Math | Behavior | Portuguese | Tetum | Math                   | Behavior |  |             |       |       |
| 2  | 3         | 4     | 9             | 10           | 11      | 12a                            | 12b                             | 12c                              | 12d | 13a                               | 13b                                   | 13c      | 13d        | 13e           | 13f  | 13g      | 13h        | 8a    | 8b                     | 8c       |  |             |       |       |
| 4  | 01        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 02        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 03        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 04        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 05        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 06        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 07        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 08        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 09        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
| 4  | 10        |       |               |              |         |                                | a.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |
|  |           |       |               |              |         |                                | b.                              |                                  |     |                                   |                                       |          |            |               |      |          |            |       |                        |          |  |             |       |       |

**Status Codes**  
 Was enrolled in grade 1, 2, or 3 in this school last year ..... 1  
 Was enrolled in grade 4, 5, or 6 in this school last year ..... 2  
 Newly enrolled in the school this year (2014) ..... 3

IF STATUS=2, MAKE SURE STUDENT DOES NOT APPEAR ON ANY WHITE, PINK OR 2013 YELLOW FORM BEFORE ADDING TO THIS FORM! IF ON ANOTHER FORM, DO NOT INCLUDE ON THIS FORM

**BEHAVIOR CODES**  
 Excellent ..... 10  
 Very Good ..... 9  
 Good ..... 8  
 Fair ..... 7  
 Passable ..... 6  
 Not Passable ..... 5  
 Poor ..... 4  
 Bad ..... 3  
 Very Bad ..... 2  
 Terrible ..... 1

