

# EVALUATION REPORT

## EVALUATION OF CHILD FRIENDLY SCHOOLS (CFS) TEACHER TRAINING INTERVENTION UNDER UNICEF-SUPPORTED CFS INITIATIVE OF MINISTRY OF EDUCATION IN TIMOR-LESTE

DECEMBER 2015



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## Preface

The poor quality of teacher education and training in many countries, not least poorly resourced low income countries often means that rote and recitation approaches to teaching and learning are the norm. Classroom talk is largely found to be teacher-fronted, made up of teacher-led explanation, recitation, cued elicitations, chorus responses and use of chalk/white board. Such narrow pedagogical approaches do not support critical thinking, conceptual learning, or problem-solving and teamwork skills.

In the face of these challenges, UNICEF has worked with the Ministry of Education to introduce the child-centred approach called *Child Friendly School/Eskola Foun* through gender-sensitive teacher training and pupil-centred participatory approaches and to provide a safe, hygienic, non-violent, non-discriminatory teaching and learning environment in the districts of Aileu, Viqueque, Ermera, Manatuto and Oecusse. In total, 1434 teachers have received CFS regular training and 875 teachers have received subject specific training in literacy, mathematics and science from 121 UNICEF-supported schools. The schools have also received training in the use of instructional materials.

In addition to the teacher training, school directors and deputy directors in the 121 schools have received professional development to better manage their schools and to provide instructional leadership to teachers and students through the development of school improvement plans. The establishment of PTAs and school councils has also provided opportunities for parents, families and communities to participate, manage, and have a vested interest in schools and in their children's education. Schools have also benefited from improvements in school infrastructure through the provision of classrooms, furniture, water, and sanitation facilities. Sixty-five school inspectors and 13 District Education Superintendents have also been trained to provide external support to the schools and clusters.

The current evaluation was commissioned to inform decisions on operations, policy and strategy for the improvement and enhancement of the MOE's CFS/Eskola Foun teacher training programme interventions. The study set out to investigate the extent to which provision of CFS/Eskola Foun training had strengthened the capacities of teachers by improving their pedagogical practices in the classroom. It also set out to investigate the extent to which the training had strengthened the capacity of school directors, coordinators, deputy school directors, district superintendents and inspectors for offering professional support and development to teachers at the school and cluster level.

## **Acronyms and Abbreviations**

CFS	Child Friendly School
CPD	Continuing Professional Development
EGRA	Early Grades Reading Assessment
GAT	Gabinete de Apoio Tecnico
ICT	Information and Communication Technology
INFORDEPE	National Teacher Training Institute
INSET	In-service Education and Training
MOE	Ministry of Education
NESP	National Education Sector Plan
NETI	National Education Training Institute
NGO	Non-governmental Organisations
PTA	Parent-Teacher Association
PRESET	Pre-service education and training
TORs	Terms of Reference
ToT	Training of Trainers
UNICEF	United Nations Children’s Emergency Fund
UNTL	Universidade Nacional de Timor-Leste
WASH	Water, Sanitation and Hygiene

## **Acknowledgements**

This study was made possible by the support and contributions from various individuals, groups and institutions. Specifically we would like to thank the Ministry of Education and UNICEF for their support during the study. Special thanks go to Joao Da Costa, Takaho Fukami, Nuno Eugenio Goulart, Sandra Gusmao, Toshiko Takahashi and Vicente Teotonio Lopes for their assistance and support throughout the study.

The study team is very grateful to the data collectors appointed from the University of Timor-Leste, to Vice Minister Dulce de Jesus Soares, Cidalio Leite and Alfredo de Araujo from the MOE, and to Debbie Wong and Susanne Owen from DFAT, for their support and high standards of professionalism throughout the data collection phase. We were also grateful for the feedback from the UNICEF regional office, particularly to Jim Ackers and Riccardo Polastro.

During the field work the district education officers, inspectors, GATs, school directors, deputy directors, teachers, PTAs and pupils also played an important role in the study and we would like to extend our thanks to them.

The University of York study team comprised the following:

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## **Executive Summary**

### **Background and object of the study**

This report provides a formative evaluation of the design and implementation of the Child Friendly Schools (CFS) Teacher Training intervention under the UNICEF-supported CFS initiative of the Ministry of Education (MOE) to assess its relevance, effectiveness, efficiency, sustainability and equity. UNICEF has commissioned the evaluation to inform decisions on operations, policy and strategy for the improvement and enhancement of the MOE's CFS/Eskola Foun teacher training programme interventions under the next country programme (2015–2019).

The main object of the evaluation was to investigate the extent to which provision of CFS/Eskola Foun training was being utilised to help strengthen the capacities of teachers by improving their pedagogical practices in the classroom. It also set out to evaluate the extent to which the training had strengthened the capacity of school directors/coordinators, deputy school directors, district superintendents and inspectors for offering professional support and development to teachers at the school and cluster level.

### **Evaluation methodology**

Following an initial desk review of the academic and grey literature on Timor-Leste's education system, the process evaluation used a mixed-method design using both quantitative and qualitative methods: a timeline observation schedule and frequency of teaching and learning behaviours to study how the CFS training was being implemented in the classroom and semi-structured interviews with a range of stakeholders at the national and district level to elicit their views on the its relevance, effectiveness, efficiency, sustanainability and equity.

A cross section of 10 schools from 5 districts of Timor-Leste (Aileu, Ermera, Manatuto, Oecusse and Viqueque) were selected that included CFS and non-CFS trained teachers. A team of 20 data collectors from the University of Timor-Leste were selected and trained to enable the collection of data during the second week of September 2015.

### **Main Findings**

In terms of the relevance, effectiveness, efficiency, sustainability and equity of the CFS training, while much of the teaching and learning found in Timor-Leste primary schools follows a traditional transmission model made up of teacher directed activities, teachers trained in child friendly methods are starting to use a wider repertoire of interactive, participatory and inclusive approaches to improve the quality and equity of education.

Overall, the findings from the classroom observations and interviews show that the CFS training was considered to be very relevant to the training needs of teachers by a range of stakeholders at the national, district and school level and that its effectiveness and efficiency is demonstrated in the findings on the way it is enhancing the professional beliefs and pedagogical practices of the teachers who had received the training. The CFS training

programme also appears to be well aligned with Timor-Leste's strategic development plan and National Education Sector Plan for teacher education to ensure ownership and its sustainability.

The majority of respondents working at the national level and district levels were in favour of the CFS training being scaled up by the Ministry of Education. However, many national stakeholders discussed the challenges posed by the current budget constraints facing education on the sustainability of the programme.

In order to ensure MOE ownership and sustainability of the CFS programme, capacity building and responsibility is being devolved down to the district level with clear divisions of roles and responsibilities between national and district offices, and between main and filial schools, school inspectors and teacher educators (INFORDEPE) being mapped out in the education teacher development system.

An analysis of the available data on the costs of implementing school-based CFS training, whereby teachers receive training and support in their clusters, schools and classrooms, suggests it is more cost effective than residential, college-based provision. The unit cost of the school-based professional development is also likely to fall as the cluster system is scaled up.

Findings from the classroom observation studies suggest that while CFS trained teachers are displaying more participatory, interactive and inclusive teaching methods in the classroom, there are still wide variations in the way teachers include girls and children with special educational needs in whole class questioning and pupil demonstration. This suggests the need for more gender-sensitive and inclusive education approaches being promoted to bring about greater equity in the training to ensure the educational needs of the most marginalised, vulnerable and disadvantaged children, particularly those in the rural areas, are met.

### **Main recommendations**

All teachers need training in the effective use of explanation and question and answer and feedback routines to promote a more participatory, interactive and inclusive pedagogy in whole class, group-based and individual activities where pupils are expected to play an active part in discussion by asking questions, contributing ideas and explaining and demonstrating their thinking to the class. They also need more training in providing formative feedback and in assessing children's learning.

A CFS training module on mentoring for inspectors, Gabinete de Apoio Tecnico (GATs) and deputy directors needs to be developed by the MOE within the next twelve months to help them mentor teachers, through discussion, guided activity and feedback, so as to improve their pedagogical skills through reflection on everyday professional practices.

A systemic approach to teacher education in Timor-Leste is required if all teachers are to maintain the necessary skills to ensure effective learning outcomes in classrooms. Over the next 12 months the MOE needs to commission a review of teacher education to ensure there

are clear linkages between PRESET and INSET, and an alignment of policies, plans and institutional arrangements.

The MOE also needs to put in place a systematic monitoring and evaluation system with input from stakeholders across all levels of the education system over the next 12 months. This will help improve accountability, planning and implementation, and assist in knowledge sharing. It will also help build a more rigorous evidence base to inform policy and practice and support arguments for greater government funding on education.

### **Children at one of the pilot schools**



## 1. Introduction and object of evaluation

This report provides a formative evaluation of the design and implementation of the UNICEF-supported Child Friendly Schools (CFS) Teacher Training intervention (known locally as *Eskola Foun*) which formed part of the Ministry of Education's (MOE) Country Programme 2009-2014 (see Annex 1).

In the light of the lack of systematic data uncovered in the desk review, a major focus of the evaluation was working 'downstream' at the district, school and classroom level to answer the evaluation questions to help national officials in the MOE and UNICEF identify and explore different options for strengthening the CFS programme. The evaluation was also to be used to help inform the design of a more rigorous impact and process evaluation to be conducted by UNICEF and the MOE in 2016 against which to judge the impact and cost effectiveness of the teacher education interventions on learning achievement.

The evaluation was designed to be utilisation-focused<sup>1</sup> and was planned so that the classroom observation and interview findings would help identify the main strengths, weaknesses and areas for improvement of the CFS training to inform future decisions by the MOE and UNICEF. It was also designed to feed into a baseline evaluation of the CFS programme planned for 2016. To this end, the findings were shared with MOE officials and UNICEF officers at a validation workshop in Dili in December 2015.

The specific ***Theory of Change*** agreed with the management team and guiding the evaluation was conceptualized as follows:

**IF** teachers, school directors/coordinators, deputy school directors are provided with CFS training highlighting new effective teaching and learning pedagogies, and schools are supported through ongoing support from district superintendents and inspectors and school cluster heads;

**THEN** teachers will learn new skills and be more likely to apply participatory, interactive and inclusive teaching methods in the classroom; school support visits will strengthen relationships between teachers, directors/coordinators, deputy school directors and district superintendents and inspectors; and, participants successfully completing the CFS training will have demonstrated improved pedagogic practices and learning outcomes for children;

**BECAUSE** research into the quality of teaching and learning in Timor-Leste suggests teachers have inadequate skills and knowledge of learner-centred pedagogies to support effective learning at the basic education level. Therefore the provision of CFS training can help strengthen the capacities of teachers, school directors/coordinators, deputy school

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<sup>1</sup> Utilization-Focused Evaluation is an approach based on the principle that an evaluation should be judged on its usefulness to its intended users so as to facilitate decision making amongst the people who will use the findings of the evaluation. In this sense the evaluation was designed to be formative by exploring how the CFS is impacting on classroom processes about which little is known in Timor-Leste and to inform future decisions about the design and implementation of the training as it is scaled up.

directors, district superintendents and inspectors and school cluster heads, and raise the quality of educational provision in Timor-Leste's schools providing basic education.

## **2. Evaluation object**

As part of its country programme since 2010, UNICEF has helped the MOE develop the National Basic Education Curriculum for Grades 1-9 and introduced the child-centred approach called Child Friendly Schools through gender-sensitive teacher training and child-centred participatory approaches and to provide a safe, hygienic, non-violent, non-discriminatory teaching and learning environment in the districts of Aileu, Viqueque, Ermera, Manatuto and Oecusse. In total, 1434 teachers have received CFS regular training and 875 teachers have received subject specific training in literacy, mathematics and science from 121 UNICEF-supported schools. The schools have also received training in the use of instructional materials.

School directors and deputy directors in the 121 schools have also received professional development to better manage their schools and to provide instructional leadership to teachers and pupils through the development of school improvement plans. The establishment of PTAs and school councils has also provided opportunities for parents, families and communities to participate, manage, and have a vested interest in schools and in their children's education. Schools have also benefited from improvements in school infrastructure through the provision of classrooms, furniture, water, and sanitation facilities. Sixty-five school inspectors and 13 District Education Superintendents have also been trained to provide external support to the schools and clusters.

The CFS teacher training was composed of four thematic phases: 1) basic Principles of CFS; 2) Child to Child Approach for School Hygiene Promotion; 3) Student and Community Participation; and 4) Advanced Methodology and Learning Guide. Each phase was delivered over five days. INFORDEPE was commissioned to deliver the training through a Training of the Trainers (ToT) workshop in Dili. The trainers were then expected to deliver the CFS teacher training at each school (school-based training). The training involved a combination of theoretical sessions and practical teaching-learning in the classroom. Education supplies were provided for establishing learning corners to assist the application of the child friendly approach.

The CFS general training was further complemented by subject-based training applying the child-centred, participatory approach in three subjects: 1) Literacy; 2) Mathematics and 3) Science. The modality of the training delivery followed the same as the CFS training – where the ToT was conducted in Dili, followed by school-based training by the trained trainers.

In addition to the school-based teacher training, training on school-based management, pedagogy and CFS for school management personnel (i.e. deputy school directors and GAT responsible for school administration) as well as school inspectors was provided to support teachers and school directors in the implementation of CFS. As for the training for GAT and Inspectors, the INFORDEPE trainers undertook the training in Dili. Training for the deputy school directors was conducted in each district by INFORDEPE.

### **3. Evaluation Purpose**

The purpose of the evaluation as set out in the TORs was to investigate the extent to which provision of CFS training had helped strengthen the capacities of teachers by improving their pedagogical practices in the classroom. It also set out to investigate the extent to which the training had strengthened the capacity of school directors/coordinators, deputy school directors, district superintendents and inspectors for offering professional support and development to teachers at the school and cluster level.

The evaluation was designed to be used to inform the relevant sector policies, plans and strategies in general, as well as teacher training systems and contents more specifically, for further improvement and enhancement. It aimed to provide strategic guidance to UNICEF in determining its focus areas of support to MOE for mainstreaming of CFS principles in the basic education sector in Timor-Leste under the current country programme (2015–2019).

### **4. Scope**

The scope of the evaluation of the CFS training programme focused on the basic education phase (primary and pre-secondary, Grades 1-9) with a geographical scope of 121 CFS schools in 13 districts in Timor-Leste from 2009 until 2014. The programme formed a key component of the Government of Timor-Leste-UNICEF Country Programme and Country Programme Action Plan 2009-2014, together with the relevant sector policies, plans, and strategic and legal documents of the Government and the MOE of Timor-Leste and other key actors. The CFS interventions covered both general training in child-centred, interactive teaching and learning that included the use of learning corners and other relevant supply materials and further subject-based training and relevant supply materials. In addition deputy directors, GAT and school inspectors were also given the general, subject-specific and relevant supply materials training.

### **5. Objectives**

In response to the TORs, the key objectives of the study were to:

- (i) study the effectiveness, relevance, sustainability, efficiency and equity of the teacher training interventions implemented by UNICEF in 121 basic education schools in the 13 districts of Timor-Leste since 2009;
- (ii) build on the findings and make recommendations to inform the relevant education sector policies, plans and strategies for teacher training in basic education in Timor-Leste as part of the 2015–2019 country programme;
- (iii) provide strategic guidance to UNICEF in determining its focus areas for supporting the MOE in scaling up the CFS teacher training programme over the next four years.

A list of questions used during the evaluation is given in Annex 2.

### **6. Evaluation Methodology**

The evaluation made use of a multi-method research design using both quantitative and qualitative approaches. This allowed for methodological triangulation to achieve greater validity and reliability in the study. Each of the research methods were closely related to each other to ensure a fully integrated research design with a central focus on how the CFS training was being utilised in the classroom and how its relevance, effectiveness, efficiency sustainability and equity was being perceived by key stakeholders at national, district, cluster and school level (see Annex 2).

In placing the study of classroom processes at the centre of our evaluation design, we conceptualise pedagogy as being made up of both the observable act of teaching and its attendant discourse. It comprises teachers' ideas, beliefs, attitudes, knowledge and understanding about the curriculum, the teaching and learning process and the learning of their pupils. In other words, it is concerned with what teachers actually think, do and say in the classroom, and how the act of teaching links with the social, cultural and political context in which teachers operate.

Much of the evidence on effective teaching and learning practices comes from high income countries. For example, Hattie's synthesis of 800 meta-analyses involving over 50,000 studies related to achievement in school-aged children in respect of interactive strategies, such as reciprocal teaching, collaborative group work and peer tutoring encouraging pupil verbalisation and teacher feedback as some examples of effective practices. Hattie's synthesis also indicates that high quality classroom talk and teachers making explicit and sharing the learning outcomes and standards by which the learning is being judged, enhances understanding, accelerates learning and raises learning outcomes<sup>2</sup>. Such interactive approaches and epistemic clarity make the learning visible for both teachers and pupils allowing for the monitoring of learning and formative evaluation. They also point to the importance of investigating what can be observed in the act of teaching (i.e. task, activity, classroom interaction, assessment) as key indicators of quality.

While much of the evidence on effective teaching and learning processes has come from high income countries, a substantial body of evidence based on observation studies from low and middle-income countries is starting to emerge. A recent review commissioned by the UK government's Department for International Development, building on a systematic review of 489 studies and an in-depth study of 54 empirical studies, concluded that classroom interaction is the pedagogical key<sup>3</sup>. It found that teachers who promoted an interactive pedagogy also demonstrated a positive attitude towards their training and the pupils, and saw teaching and learning as an interactive, communicative process.

Three specific strategies that promoted an interactive pedagogy and visible learning from pupils were identified: providing feedback; sustained attention and inclusion in the

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<sup>2</sup> Hattie, J., 2008. *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Abingdon, Routledge.

<sup>3</sup> Westbrook, J. Durrani, N. Brown, R. Orr, D. Pryor, J., Boddy, J. and Salvi, F. 2013. *Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries*. London, Institute of Education, EPPI Education Rigorous Literature Review. London.

classroom; creating a safe environment in which pupils felt supported in their learning; and, drawing on pupils' backgrounds and experiences. From the three strategies, the following effective teaching behaviours were identified: frequent and relevant use of visual aids and locally produced learning materials beyond the use of the textbook; open and closed questioning, expanding responses, encouraging pupil questioning; demonstration and explanation; and, use of local languages.

Most importantly it was found that teachers needed training in more interactive approaches to build on traditional rote (drilling, facts and routines through repetition), recitation (using short question/answer sequences to recall or test what is expected to be known), instruction (telling children what to do and how to do it) and exposition (imparting information and explaining things). Teachers also need to include discussion (open exchange of views and information and problem solving) and dialogue (co-construction through open questions, probing pupils' responses and the thinking which lies behind them, and building on their contributions) in their teaching repertoire.

By studying the impact of the CFS interventions on the quality of the teacher-pupil interaction, epistemic clarity (i.e. how teachers share, summarise and consolidate the learning outcomes and make clear the standards by which knowledge claims are judged, evaluated and justified), class management and classroom climate, we were able to reliably judge the effectiveness of the training on classroom processes in Timor-Leste's basic education (primary and pre-secondary, Grades 1-9) schools. Through the use of stakeholder interviews at the national and district level, and a stakeholder workshop we were also able to assess its relevance, efficiency, sustainability and equity for informing the relevant sector policies, plans and strategies, as well as teacher training systems and contents for further improvement and enhancement.

## **7. Evaluation instruments**

The study made use of two systematic observation schedules to conduct a process evaluation: a timeline observation schedule (Annex 4) and a frequency of teaching and learning behaviours schedule completed in the natural setting of the classroom (Annex 5). The study also used a perception survey to consult with a range of stakeholders at the national and district level including MOE officers, district officers, school directors, inspectors, deputy directors, and teachers and pupils to gather their views on the relevance, efficiency, effectiveness, sustainability and equity of the CFS training (Annex 6). All three instruments were designed to be comprehensive, manageable and as low-inference as possible in capturing current pedagogical practices and allow for triangulation of the classroom findings with stakeholder perceptions of how the CFS training is being utilised at the school and cluster level.

The observation instruments were informed by international pedagogical research into effective teaching behaviours focusing on what can be observed in the act of teaching (i.e. task, activity, interaction, assessment) so as to ensure the observations of classroom processes are as valid and reliable as is practically possible<sup>4</sup>.

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<sup>4</sup>Alexander, R. (2008). *Education for All, The Quality Imperative and the Problem of Pedagogy*. London: DFID.

**Observation Schedule 1: Timeline analysis:** this schedule required the observer to record the main teaching activities from a list of prompts *every five minute interval* in the lesson. In the note section, observers were asked to record activities not covered in the checklist and to provide further contextual information on the activities ticked in the checklist (Annex 4). Because it was following the time-line of the lesson, the timeline analysis was designed as an aide-memoire so as to inform the completion of Observation Schedule 2. All lessons were observed by a pair of observers and the observation schedule completed independently.

**Observation Schedule 2: Frequency of teacher /pupil behaviours:** this schedule was designed to capture the frequency of teacher and pupil behaviours occurring during the course of a lesson and was completed at the end of the lesson building on the timeline analysis (Annex 5). The schedule asked the observer to record the frequency of 33 teaching and learning activities, many of which are said to lead to higher learning outcomes, using a 4 point scale: 1 = behaviour never observed; 2 = behaviour rarely observed (i.e. once or twice); 3 = behaviour occasionally observed (i.e. four or five times); 4 = behaviour consistently observed. Observers initially completed the schedule independently and then agreed and recorded the frequency of each of the 33 behaviours.

The study was also seen as a capacity building exercise for teacher educators in Timor-Leste so a team of 20 data collectors were selected and trained from the University of Timor-Leste over 3 days in Dili. During the training inter-rater reliability checks were carried out to establish a high level of consistency in the observation data (Annex 7). During the 3-day data collection training workshop, inter-rater reliability checks were conducted on Observation schedules 1 and 2 using digitally recorded lessons consisting of descriptive item analysis so as to achieve reliability ratings of at least 80% amongst the data collectors (Annex 8)<sup>5</sup>. By the end of the training workshops, observers were achieving over 80% agreement on their inter-rater reliability scores.

## 8. Sample

For the study, we selected 5 of the 13 districts where UNICEF has been focusing its teacher training and school leadership and management support. For the systematic classroom observations and interviews at district level, a purposive sample covering a cross section of 10 schools from 5 districts of Timor-Leste (Aileu, Ermera, Manatuto, Oecusse and Viqueque) was selected that included CFS and non-CFS trained teachers. We also ensured the sample covered central basic education schools and filial or satellite schools that had received support for construction / rehabilitation (classrooms and WASH facilities), as well as school furniture for children and teachers, and which are being supported by inspectors trained in the CFS/Eskola Foun approaches.

Working in teams of 4 to a district, the 20 observers operated in pairs and spent a day in each school during the second week of September (7<sup>th</sup> - 11<sup>th</sup>). Where possible a Grade 3 and Grade 6 lesson in literacy, mathematics and science was observed. Of the 105 schools, 35

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<sup>5</sup> This level of reliability is accepted internationally as being more than adequate for classroom observation analysis.

were defined as being urban<sup>6</sup> and 70 were rural. For the number of pupils in a class the mean was 33.22 and the mode was 42. There were six outliers: one lesson had 141 pupils and five classes had less than 10 pupils.

Although we aimed to collect data on Grade 3 and 6 classes, many of the classes in rural areas were multi-grade with children of different ages (see Annex 10, Table 3). For the final sample, 69 of the 105 observations covered grades 3 and 6 and the rest were multi-grade. Of the 105 lessons, 39 were observed in literacy classes, 38 in mathematics and 28 in science. Observed teachers were also asked about their level of CFS training: whether they had received the general CFS training, subject specific (i.e. in literacy, mathematics and science) and/or training in the use of instructional materials. It was found that nearly three-quarters of the teachers observed in the sample had undergone all three forms of CFS training (i.e. general, subject specific and training in teaching materials).

Interviews were carried out with 147 key stakeholders at national and district levels, with national education representatives, district level staff and inspectors, GAT (Gabinete de Apoio Tecnico) technical assistance personnel, school directors and assistant directors, Parent-Teacher Association (PTA) representatives, teachers and pupils (see Table 1). The adult interviewees represented a full range of roles, backgrounds, qualifications and experience. The teachers covered a large range of subjects and grades taught: their experience ranged from a volunteer teacher with less than a year's experience, to a colleague who had started teaching in Timor-Leste in 1962. Qualification levels ranged from leaving high school without any qualifications (the majority) through to just under 10% having a Bachelor's or, in a small number of cases, a Master's Degree. The interviews explored stakeholder perceptions of the relevance of the CFS training and the effectiveness, efficiency, sustainability and equity of the programme (Annex 6).

National stakeholders were interviewed in Dili, and district stakeholders, teachers and students were interviewed in schools or district offices, in two different regions. All of the interviews were carried out face-to-face, with one exception (a PTA representative was not available at the appointed time, and was some distance away, so a telephone interview was conducted).

**Table 1: Number of interviews**

Adults: national level / key stakeholders	23
Adults: director level / key district stakeholders / school directors	27
Adults: teachers	30
Pupils (in groups)	67
<b>Grand Total</b>	<b>147</b>

The interviews enabled the research team to collect perceptions and opinions about the CFS intervention at a number of different levels of involvement. The findings help to explain some of the patterns identified in the statistical data. They also provide very useful pointers

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<sup>6</sup> For our working definition of urban and rural, all district capitals were considered as urban areas and areas with a population 2000 or more inhabitants with less than 50% of the population employed in agriculture or fishing and with access to electricity, piped water, schools and medical care were also considered as urban.

in terms of the perceived strengths and weakness of the CFS intervention, and for the future implementation and adaptation of this programme.

## 9. Limitations

In order to inform the design of the evaluation, the team reviewed over 50 background documents<sup>7</sup>. Many of the documents were of a policy and situation analysis nature, including strategic development plans, financial information, donor reports, curriculum and teacher training materials. While they provided clear evidence that UNICEF works effectively at both policy and service delivery levels in order to help build an education system to provide quality education for Timorese children, little systematic data has been collected to measure the relevance, efficiency, effectiveness, sustainability and equity of the CFS teacher training interventions at the school and classroom level.

For example, the 2009 CFS baseline assessment failed to collect classroom observation data as schools were closed throughout the data collection period<sup>8</sup>. Similarly, little systematic data were available on children's learning outcomes. We could find only one study on children's literacy learning: the 2009 Early Grade Reading Assessment (EGRA)<sup>9</sup> where it was reported only 33% of children at Grade 3 could read at the appropriate level. No equivalent study had been carried out into numeracy skills.

Another limitation faced by the evaluation team was the lack of data on children's social and emotional wellbeing. No baseline data on children's learning and social and emotional wellbeing had been collected at the start of CFS training or throughout the roll out of the training. There is, therefore, a need to conduct a rigorous baseline evaluation as the CFS training is scaled up using an experimental or quasi-experimental design with a focus on impacts on children's learning and social and emotional wellbeing, as well as changes in classroom processes. This will help determine what works in raising the attainment of children in Timor-Leste basic education schools, and help to further understand how the CFS training is being implemented on the ground.

Although it would have been useful to compare the teacher groups who had experienced different formats of CFS training - general, subject specific, and in the use of instructional materials - with each other, and with non-CFS trained teachers, as explained above, the large degree of overlap between the three types of CFS training in our sample was such that these comparisons would have been unlikely to reveal anything useful. Of the 105 teachers observed, for example, 74 had taken part in general CFS training and, of these, 62 had also taken subject specific training (an 81%% overlap). This degree of overlap would have meant similar findings regardless of which type of CFS training was analysed. This is why we chose to use general CFS training, the type which had the most participants as well as the highest level of generality, as our definition of 'CFS' when making comparisons with the non-CFS sample.

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<sup>7</sup> See Annex 3

<sup>8</sup>American Institute for Research. (2009). *Eskola Foun in Timor Leste: Baseline Assessment, Framework for Formative Monitoring and Strategy for Engagement*. Washington, DC.

<sup>9</sup> World Bank (2010). *Timor-Leste: An Analysis of Early Grade Reading Acquisition*. World Bank: Timor-Leste.

## 10. Rapid assessment

In addition to the literature review and data collected as part of the evaluation, UNICEF colleagues provided the research team with Rapid Assessment data which had been acquired in the course of staff visits to CFS schools. This data consisted of both quantitative and qualitative information. The qualitative data included interviews with three PTA representatives and two teachers in Oecusse and Emera. The quantitative data consisted of a spreadsheet for each of five schools from one region (Oecusse), visited in June 2015. The spreadsheets provided answers to a number of questions about physical aspects (or the 'hardware') of the school, including information about buildings, WASH facilities, learning materials and textbooks, and sports equipment. An analysis of the findings is provided in Annex 9.

## 11. Ethical issues

Because classroom observations and interviews with key stakeholders, including children, were conducted, the team adopted and adhered to UNICEF's ethical guidelines for the conduct of research regarding protection, confidentiality and sensitivity where stakeholders and other potential beneficiaries participate as informants to the study. Within the analysis schools, respondents and other individuals were not identifiable directly or indirectly. Care was taken when reporting statements or interviews. All informants were offered the option of confidentiality and told their participation in the research was voluntary.

### Student discussion group



## 12. Findings

This section reports on the findings emerging from the observation and interview data to answer the question on the extent to which results at the output and outcome levels of the CFS training programme have been achieved. Furthermore it sets out to discuss the reasons behind their achievement or non-achievement and what can be done to make the CFS intervention more effective. More detailed information on the quantitative findings can be found in Annex 10.

### 12.1 Relevance

In answering the question of the extent to which the CFS/Escola Foun approach and interventions are still relevant to country's priority needs and to UNICEF's refocused agenda on equity, the findings from the classroom observations suggest that the CFS training is well received at the district and school level and that it is having a significant impact on teaching and learning practices of the teachers who had received the training. When asked about the relevance of the CFS interventions for meeting the needs of children, parents, teachers, school leaders and education officers, the majority of respondents at national and district level were very positive about UNICEF's technical support and training. While meeting UNICEF's latest priorities on educational equity, gender equality and human rights<sup>10</sup>, the CFS training programme also appears to be well aligned with Timor-Leste's strategic development plan and National Education Sector Plan (NESP). The plan envisages a radical improvement in teaching quality by increasing teacher training through the National Education Training Institute (NETI), and improved human resource management and through implementation of the decentralised school management cluster system<sup>11</sup>. The CFS training also been adopted by the MOE as the basis of its continuing professional development (CPD) and is being built into the national cluster system.

In the interviews, school directors and teachers also reported that there have been improvements in the external support and knowledge and skills in implementing child friendly methods provided to schools by school directors, deputy directors, GAT and inspectors. The cluster system was also reported to be working well when deputy school directors were given the time and resources to support satellite schools. However, it has to be recognized by education officials at the national and district level that building the capacity of the external support being offered to schools will require additional training in mentoring skills and an investment of time and money in building partnerships, collaboration and delegation.

As the reported variation in the external visits provided to schools shows, capacity building and incentives need to be devolved down to those responsible for delivering school-based training with a clear division of roles and responsibilities between national, regional and district offices and inspection services, and between school directors, deputy directors and teacher educators (INFORDEPE). This will ensure that teacher education is part of a broader capacity development strategy that supports all actors in the education system, including,

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<sup>10</sup> UNICEF Annual Report 2014 Timor-Leste

<sup>11</sup> Timor-Leste Strategic Development Plan 2011–2030. (2010) Government of Timor-Leste.

head teachers, district education officers and teacher trainers, and that it is cost effective against all the other competing demands on the education budget.

## 12.2 Effectiveness

In order to address a key question on the extent to which results at the output and outcome levels of the CFS programme have been achieved, reasons for their success or otherwise, and to formulate recommendations on how they can be made more effective, we systematically observed the teachers to determine which of the participatory, interactive and inclusive teaching methods they were employing following their CFS training. Overall, the frequency observation findings show that much of the teaching and learning found in Timor-Leste primary schools follows a traditional transmission model made up of teacher directed activities (i.e. explaining, question and answer, teacher rote and chorus response, writing on the chalk board, reading to the class, lesson review, teacher marking, class management, and administration).

This meant that that some of the effective teaching behaviours promoted as being child friendly in the CFS training were generally being under-utilised by teachers. For example, observers noted that the following effective teaching behaviours were 'never' or 'rarely' observed (i.e. once or twice in a lesson):

- Peer tutoring in 94% of lessons
- Paired or group work in 47% of lessons
- Pupil demonstration in 56% of lessons
- Encouraging pupils to ask questions in 78% of lessons
- Building a pupil answer into a subsequent question in 81% of lessons
- Asking open-ended questions in 44% of lessons
- Commenting on a pupil answer in 45% of lessons
- Probing pupil answers in 40% of lessons
- Using plenaries to summarise, consolidate and extend learning in 67% of lessons

When the data were analysed by grade, subject and district it was found there were very few statistical differences suggesting teachers use the same under-lying pedagogy across age ranges, subjects and districts.

Similarly, the timeline analysis showing time spent on different teaching and learning activities suggests that teacher-fronted activity occupied over two-thirds of the lesson time. The three most dominant teacher activities are teacher-led explanation, recitation and rote, class management and use of the chalkboard accounting for a third of the lesson time. Of the 27% of the time spent on pupil activity, only 6% was spent on paired or group work and 3.5% was spent on pupils demonstrating to the class. This compares to nearly 14% of the time being spent on individual seat work, working from the chalk board or textbook. Again, the analysis showed there was little difference in the timeline data across type of school (main or filial), grades, subjects and districts.

Of the 105 teachers observed, 54 (51.4%) of the 105 presented a lesson plan. Of these 37 (68.5%) were judged by the trained observers to be 'good' or 'very good' in terms of the

clarity of the learning objectives. The lesson timeline was judged to be 'good' in 23 (42.5%) of the lesson plans and 39 (72%) were judged as 'good' or 'very good' in terms of the range of teaching and learning activities. The use of instructional materials varied from 21 (20%) lessons being judged as 'unsatisfactory' in terms of the range of materials, and 22 (21%) lessons were judged as 'good' in terms of use of the instructional materials. Homework activities were rated as unsatisfactory in 33 (31.4%) of the 54 lessons.

However, further analysis of the frequency data investigating where behaviours were 'occasionally' (i.e. 4 or 5 times) and 'consistently' being used by teachers found a strong association between the positive teacher behaviours and CFS training. A considerably larger proportion of CFS, than non-CFS teachers, were likely to:

- call on pupils to answer questions individually
- exhibit personal enthusiasm
- make effective use of the chalkboard
- display a positive tone
- switch language codes
- know individual pupil names
- move around the classroom to interact with pupils
- effectively manage lesson time
- move around to interact with pupils

Similarly, the timeline data found little pedagogic variation across type of school, grade, subject and district. However, both CFS trained and non-trained teachers spent 66% of the time on teacher-fronted activities and 26% of the time on pupil activities, CFS trained teachers spent less time on teacher-led explanation, question and answer and rote, writing on the chalkboard and class management and more time reading to the whole class and reviewing the lesson topic. CFS trained teachers also spent less time on individual seat work and more time on paired or group work.

Overall, the frequency and timeline analysis suggests that while much of the teaching and learning found in Timor-Leste primary schools follows a traditional transmission model made up of teacher directed activities (i.e. explaining, question and answer, teacher rote and chorus response, writing on the chalk board, reading to the class, lesson review, teacher marking, class management, and administration), CFS trained teachers are starting to use a wider repertoire of teaching and learning approaches. These include dialogue and discussion alongside explanation, instruction rote and recitation in whole class and paired/group-based activities. In this way, pupils are being given more opportunity to express their thoughts and engage with others in joint intellectual activity so as to advance their individual capacity for productive, rational and reflective thinking.

There is no basis for complacency, however, as the observation data suggest there are some activities where the differences in the proportions of CFS and Non-CFS teachers using specified positive behaviours are small. For example:

- commenting on pupil answers
- using a range of instructional materials

- using peer tutoring
- building pupil answers into subsequent questions
- checking for prior knowledge

It also seems from the observations that the majority of teachers, including the majority of CFS trained teachers, could not identify pupils with special educational needs, nor did they include in their questioning. Similarly observers reported boys were twice more likely than girls to be asked a question by teachers and in two-thirds of lessons teachers 'never' or 'rarely' provided equal amounts of feedback to both boys and girls. It is also a concern that only 23% of CFS teachers consistently used paired/group work; only 3% of these teachers consistently used peer tutoring, and only 11% consistently used a range of instructional materials. It may be that future CFS training could be enhanced by putting greater emphasis on these specified activities; for example, broadening the teaching repertoire through more varied questioning and a greater use of paired and group work, and teaching aids drawn from the local environment.

While no data were collected to measure the effectiveness of the CFS training on pupil learning outcomes, the interviews with stakeholders at the district and school level indicated it was having a positive effect on learning achievement, behaviour and life skills more generally, thereby supporting the findings emerging from the quantitative analysis. The overall tone and substance in the interviewees' responses were positive. In general, responses were more positive as we moved up the hierarchy from teachers, through GATs, assistant directors and directors, through to district officials, perhaps reflecting the degrees of involvement and commitment to CFS at these different levels. But there was an overarching view that CFS had moved things forward and that it was right that the children should be at the centre of the teaching and learning process.

In terms of the perceived benefits of CFS, a range of positive answers were provided, based on the following factors:

- Better lesson planning: *'The teacher has to prepare a lesson plan: there are a lot of exercises and activities for the students'. 'Writing lesson plans really helps the teachers'.*
- Improvements in teacher knowledge and skills – *'The training has improved our knowledge and skills'. 'I have definitely improved my skills as a teacher using the CFS approach. It makes you think about how the students can be encouraged to be active'.*
- Improved student confidence: *'One improvement is that working in groups enables the students to speak out, they become more confident'. 'There are a lot of advantages to the new methods... Now the students are far more active'. 'There has been a lot of improvement on the student side because now they are the active ones'. 'The mentality of the students has improved. They are brave enough to talk in front of the class'.*
- Benefits from cooperative / collaborative learning - *'We teach them in groups and this builds their cooperative mentality'. 'There has been a big improvement because of group-based working. The more advanced students help other students'. 'The sharing of information among the groups is good'.*
- Inclusiveness / suitability for all students – the universal response from all the adult interviewees was that the CFS training was appropriate for all groups of pupils. Their typical response here was: *'Everyone is treated equally here, we do not discriminate'.* It

would seem that there was a strong sense of fairness and inclusiveness in the schools *before* CFS training took place, but that the training had reinforced this by means of its child-centred approach.

When asked about how CFS training had helped to improve children's learning outcomes, a few teachers talked about improvements already in place – *'This model is really good. Reading levels have improved and pupils can understand more'*, but the general pattern of response here was that improvements were taking place, though they would take time and a step-by-step approach was needed. One teacher, typically, said: *'Yes, there have been improvements. Slowly, there have been improvements'*.

Interestingly, the teachers' view, that there was a gradual improvement in learning, was supported by the PTA representatives. One deputy chair of the PTA said: *'Yes, there has been an improvement since the implementation of CFS. I have noticed that the students are using the new participatory language even outside the school. There is also improved discipline'*. Another PTA representative said that *'everything had come together'* after the CFS training: *'Previously we had lots of difficulties in the school, there were some problems between students and the teachers, but now there are no problems. Also, after the CFS training some new buildings were added. We [the parents] pushed for that'*. Another PTA representative echoed the teachers and added qualified support: *'CFS is promising, we are moving forwards, but it is a new context for us'*.

The PTA interviews and focus group interviews with pupils also suggested there have been improvements in the leadership and management of schools and greater pupil and parent participation in the life of the schools.

### **12.3 Efficiency**

When asked in interviews about how efficiently resources were deployed for implementing the training at the district, cluster and school level, many stakeholders, including district officers, school directors, teachers and PTA members, spoke about the challenges they had encountered when implementing the different elements of the CFS training. Most were put down to external factors that militated against implementing and following up on CFS training. Four main types of challenges were identified:

- Lack of textbooks and materials – *'We attended all the training but we did not get any textbooks. We had to teach on the basis of what was available here'. 'We cannot really implement CFS without the textbooks... The teachers work hard with limited resources'. 'In one classroom we have 50 students and books have to be used one between four'. 'There is... a lack of materials'. 'We do not yet have curriculum documents. We have to devise the curriculum ourselves'*.
- The need for language training - *'The teachers, especially the younger teachers, would like help with the Portuguese language'. 'The younger teachers need to have more support in the Portuguese language'. 'We would also like to have the curriculum documents translated into Tetum'*. This may vary by region as the point was made by considerably more respondents in Ermera district than in Viqueque district.

- A need for smaller classes – *‘The new methods will probably need smaller classes’. ‘40 to 60 in a class is too many’. ‘We have 60 to 70 students in some classes’. ‘40, 50 or 60 students in each class makes it difficult’. ‘The size of the school, pupil-teacher ratios, do not help the teaching or the exam results’.*
- Possible threats to discipline – *‘It puts the child at the centre, but sometimes there is no discipline. Some children do not respect the teachers’. ‘Sometimes the children don’t listen to us’. ‘We need to be able to discipline students’.*

Smaller numbers of respondents (usually just one or two) mentioned other practical challenges: buildings – *‘We don’t have a library’*; administration – one GAT interviewee said: *‘The CFS intervention is very good, but it can be difficult to fit management and administration into the model. There has not been enough consultation with administrators’*; more support for untrained CFS teachers - *‘Mentoring of teachers would help’.*

Many of the national stakeholders agreed the national scale-up of the school-based CFS training would bring cost benefits. Many saw the school cluster as an effective mechanism for supporting CPD because of their proximity to the schools and the fact that they were formed and managed by the main schools and teachers themselves. There was also strong support for devolving more ownership of the CFS training down to the cluster and school level, and providing incentives for those teachers and teacher educators who took part in the training. District level officers reported this would, in turn, require devolved powers, responsibilities and resources to district level authorities.

The continuing investment in school infrastructure by the government and international donor community was also evident from the school visits. Observers reported that 84 of the 105 classrooms visited (80%) were judged to be in ‘good’ or ‘very good’ condition and space, lighting, and ventilation in classrooms were all deemed ‘good’ or ‘very good’ in at least 78% of cases. The chalkboards were also ‘good’ or ‘very good’ conditions in over 89 classrooms (84.8%) and the classroom displays were good or very good condition in 77 classrooms (73.3%). Stakeholder interviews with PTAs also suggested there were improvements in school facilities including sanitation.

Available data on the actual costs of implementing the school-based CFS training compared to residential, college-based provision were also gathered from UNICEF, MOE and NGOs to measure the cost effectiveness of the programme before it was scaled up. By calculating both the development and recurrent costs of the programme, it was found that the unit cost of training a teacher at the school and cluster level was US\$215 and a quarter of the cost of training a teacher on a full-time, residential teacher training course. The unit cost of the school-based professional development was also likely to fall as the cluster system was scaled up.

## **12.4 Sustainability**

In order to address the question of the sustainability of the CFS training we explored the extent to which it had been embedded in the schools and in the MOE's education sector plans with the intention of costing, financing and scaling up the programme at a regional and national level. We also explored the question of what additional support was needed to enhance the CFS interventions.

National stakeholders reported that the CFS training model was being adopted as a key strategy for improving education quality under the ongoing education reforms and that it was being incorporated into the national cluster system to ensure its ownership and sustainability and its alignment with national policy on teacher education reforms. It was also reported by national officers that the CFS training had been incorporated into the new basic education national curriculum and supporting training materials in the form of scripted lesson plans for teachers. Such policy developments were seen as a way of ensuring the continuation of the CFS training once external support from UNICEF and other partners is withdrawn. It was reported that it would help to ensure the CFS training was aligned with national policy on teacher education reforms. This was a point reinforced by the head of human resources who saw the training forming part of a broader capacity development strategy that supported all actors in the education system, including, for example, district education officers, inspectors, GATs, school directors, deputy school directors and teachers.

When asked about how the long-term impact of the CFS training can be sustained by the MOE once development partners withdraw support and funding, the majority of respondents working at the national level and district levels were in favour of the training being gradually scaled up through a phased programme of implementation, as illustrated in the following quotes: *'We should expand CFS to all schools. It should be spread out country wide'*; *'Definitely yes, this is one of the best programmes we have seen'*. Some respondents were positive, but added some kind of caveat: *'It should be expanded country-wide, but with additional support, e.g. with technology and languages'*. *'Yes, it should be implemented across Timor-Leste, but there also needs to be a look at class sizes'*; *'Yes, we should expand, but step-by-step, slowly'*.

They also thought that 'model districts' could be identified in each of the regions to coach and mentor neighbouring districts, thereby disseminating good practice in terms of cluster coordination, mentoring, peer tutoring and networking. It was also recognised that such provision requires an ongoing investment of time and money in building partnerships, collaboration and delegation. However, while many supported the MOE's decision for a nation-wide scale-up of the CFS training supported by government budget, many national stakeholders discussed the challenges posed by the current budget constraints, with education currently receiving only 6% of Gross Domestic Product<sup>12</sup>.

It was suggested by the UNTL Education Department Dean of Education and representatives from Baucau Teacher Training Institute that the CFS training could be sustained if it was adopted by the teacher training institutes and used as core or supplementary materials as part of PRESET. In this way newly qualified teachers would have valuable teaching resources to take to their first post and ensure their wider dissemination in schools. It was also

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<sup>12</sup> UNESCO Institute for Statistics

suggested that as Information and Communications Technology developed (ICT) the CFS training should be made freely available in a variety of electronic formats, supported by a website, television and radio broadcasts as well as paper-based modules.

Strengthening the school inspectorate so they had a greater capacity to support schools, advice on pedagogy and to collect data to inform policy and practice was also seen as a major priority by the Director General of Pre-School and Basic Education to ensure the embedding of the CFS training in schools. Other national stakeholders also commented on the lack of capacity of staff at the district level to sustain the training, and suggested that other institutions and organisations from the public and private sector, such as non-governmental organisations (NGOs), civil society groups, universities, consultancy companies, should be identified and brought in to provide technical support.

In terms of embedding and sustaining the CFS training initiative at the school and cluster level through external support provided by the MOE and UNICEF, the majority of respondents at the district level reported that they had received good external support and some identified specific examples: *'We get good support nationally... External support from UNICEF and the National Government helped us to build the school and to put school equipment in place'*; *'We receive good support from several people. I find there is good involvement from the superintendent and inspector. There is good coordination at district level'*. However, there was some variation reported in the support received by filial schools from the main school deputy director, and five schools reported that there was *'no follow up'* after the inspector had visited their school. Most respondents were also not able to identify specific forms of external support that they would like from inspectors and GATs.

Respondents were also asked to specify what type of training would be most useful to teachers in the future. There was an interesting array of responses to this question. The two most popular types of training identified (mentioned by at least ten interviewees) were:

- Continue with the roll out of CFS training - *'There should be a continuation of CFS training as it is a good model'. 'Developing the child-centred mentality further'. 'A continuation of previous training. Capacity building'*.
- Training in languages - *'Probably the most important thing is language for the teachers'. 'There should be intensive training courses in languages for the teachers'* [i.e. in Portuguese and Tetum]. *'I can understand the teachers' difficulties with languages... The new generation need training in this'*.

Several other types of training were mentioned by smaller numbers of interviewees (usually three or four), including: mentoring, teaching methods (*'More methodology training – some teachers came straight out of high school'*); specialist subject training (*'Maths and science – we need to improve our own knowledge. It needs to be focused on subject training'*); and training on technologies / computers.

As the interviews at the national and district level and classroom observations also show, capacity building and promotion and financial incentives will need to be devolved down to those responsible for delivering CFS training with a clear division of roles and responsibilities

between national and district offices, and between main and filial schools, school inspectors and teacher educators. This will ensure that teacher education is part of a broader capacity development strategy that supports all actors in the Timor-Leste education system and that it is cost effective against all the other competing demands on the education budget as discussed in the next section.

### **12.5 Equity**

The need to ensure that all children in Timor-Leste, including those living in remote rural areas, receive quality teaching and actually learn as a result of their educational experience was highlighted in the Timor-Leste Strategic Development Plan and identified as a continuing priority in UNICEF's annual reports. However, findings from the classroom observation studies suggest that while CFS trained teachers are displaying more participatory, interactive and inclusive teaching methods in the classroom, there are still wide variations in the way teachers include girls and children with special educational needs in whole class questioning and pupil demonstration. For example wide gender variation in the distribution of teacher questions and use of pupil demonstration was found: boys were twice more likely than girls to be asked a question or requested to demonstrate in front of the class. Similarly, most teachers failed to identify and include pupils with additional learning needs in their questioning. Such findings suggest the need for more gender-sensitive and inclusive education approaches being promoted in the CFS training.

The findings on gender disparities and lack of inclusion of children with special educational needs also points to the necessity of strengthening access to and the equity of provision for all children, particularly those living in remote rural areas, through quality teacher training so that the educational needs of the most marginalised, vulnerable and disadvantaged children are met. As suggested by the observation findings arising from the CFS training, it is essential that teachers are equipped with the pedagogic skills to engage such children through the use of teacher-pupil and peer-peer dialogue and discussion. It is also essential that teachers address these themes in a manner that is relevant to the lives of the children, particularly those from the most marginalised and vulnerable communities. As suggested by the stakeholder interviews at the district level, school-based CFS training supported by the cluster system seems to offer the most effective means for reaching the remotest areas in Timor-Leste, thereby ensuring the promotion of equity, gender equality and human rights through more child-friendly and inclusive schools.

### 13. Lessons learned

The purpose of the evaluation was to investigate the extent to which provision of CFS training had helped strengthen the capacities of teachers by improving their pedagogical practices in the classroom. It also set out to investigate the extent to which the training had strengthened the capacity of school directors/coordinators, deputy school directors, district superintendents and inspectors for offering professional support and development to teachers at the school and cluster level.

Overall, the findings show that teachers who received the CFS training were more likely to use a participatory, interactive, gender sensitive and inclusive teaching approach in the classroom so as to promote cognitive engagement and understanding. Such training will help to broaden the repertoire of whole class teaching currently found in many Timor-Leste classrooms so that dialogue and discussion are included alongside the more traditional drilling, closed questioning and telling.

Generally, it was found in the observations that of the five main types of talk found in classrooms around the world, which include traditional rote (drilling, facts and routines through repetition), recitation (using short question/answer sequences to recall or test what is expected to be known), instruction (telling children what to do and how to do it) and exposition (imparting information and explaining things), discussion (open exchange of views and information and problem solving) and dialogue (co-construction through open questions, probing pupils' responses and the thinking which lies behind them, and building on their contributions) the classroom talk repertoire found in Timor-Leste basic education classrooms was often limited to the first three. Broadening this repertoire will require more core CFS training in talk moves that are academically productive; for example by encouraging the use of more open-ended questions and following up a pupil answer with a probe and by building answers into subsequent teacher questions. It will also require further training in managing whole class, paired and group-based talk by establishing clear ground rules for such activities alongside the introduction of the talk moves<sup>13</sup>.

The findings also suggest a module on mentoring incorporating how to observe, coach and provide feedback to teachers in the classroom would enhance the CFS training so that those charged with providing the school-based training such as inspectors, GATs and deputy directors are able to help colleagues, through discussion, guided activity and feedback, to improve their pedagogical skills through reflection on everyday professional practices. Such an approach is strongly supported by international research. For example, the OECD review of teacher education covering 65 countries from around the world, the argued that much can be learned from high performing countries in terms of offering a quality education for their pupils<sup>14</sup>. Countries like Finland, South Korea, Canada and Cuba place a high value on

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<sup>13</sup> Examples of training in ground rules include the expectation that pupils will listen to one another attentively and respond respectfully, to feel a sense of trust that their ideas will be taken seriously and that disagreements will be handled respectfully, to understand that this kind of talk is expected of everyone, and everyone will have a chance to participate and express their ideas so that a culture of productive talk is established.

<sup>14</sup> OECD.(2011). *Building a High Quality Teaching Profession: Lessons from around the world*. Paris: OECD publishing.

teacher education at the initial stage and through the provision of school-based professional learning.

In all high-performing education systems, teachers have a central role to play in improving educational outcomes, and are also at the centre of the improvement efforts themselves. Such systems are not driven by top-down reforms but by teachers embracing and leading on reform, taking responsibility as professionals, thereby developing a wider repertoire of pedagogic strategies for use in the classroom.

The OECD study also found that the most effective professional development programmes provide high quality professional learning that upgrades teacher pedagogic knowledge and skills over a sustained period of time rather than through disjointed one-off courses. In this way, high performing education systems provide opportunities for teachers to work together on issues of instructional planning, to learn from one another through mentoring or peer coaching, and by conducting research on the outcomes of classroom practices to collectively guide curriculum, assessment and professional learning decisions. High performing education systems also benefit from clear and concise profiles of what teachers are expected to know and be able to do at different stages of their careers so as to guide initial and continuing professional development, and create a lifelong learning framework for teachers.

By focusing on evidence from the classroom through the interrogation of talk data, it would be possible to provide a deeper exploration of pedagogical practices and evidence of learning so as to investigate what lies behind everyday classroom interaction. As more technology becomes available to schools in Timor-Leste, it may also be possible for video to be used to model and discuss effective practices with groups of teachers at the cluster and school level. Video-stimulated reflection could also be used with between mentors and teachers to help them articulate their beliefs and classroom practices as part of an action research cycle where teachers plan, teach, review and set clear targets for pedagogical improvements.

One of the main lessons to emerge from the evaluation is that a move away from ad-hoc provision to a more systematic, longer-term and sustainable approach to teacher development will do much to enhance the capacity of Timor-Leste basic education to deliver quality education. The current cluster model set up in 202 main schools seems to be the most effective way for ensuring national INSET coverage across Timor-Leste. In adopting the school-based model of training compared to traditional college-based, residential provision, there would appear to be economies of scale due to the wide reach of school-based programmes and their ability to reach remote areas in Timor-Leste. While the process evaluation findings support the view that teacher education and professional learning should be largely located in the school environment, it should also be recognised that such provision requires an investment of time and money in building partnerships, collaboration and delegation.

As the interviews at the national and district level and classroom observations show, capacity building and incentives need to be devolved down to those responsible for delivering CFS training with a clear division of roles and responsibilities between national and district offices, and between main and filial schools, school inspectors and teacher educators. This will ensure that teacher education is part of a broader capacity development strategy that

supports all actors in the education system and will also ensure that resources, capacity building and incentives are devolved to those responsible for supporting the satellite schools and teachers.

Building capacity of the entire system and support networks that link key stakeholders with one another is therefore crucial, as is the need to take the available resources being allocated into account. The current evaluation findings suggest developing the capacity and training needs of those charged with organising and providing the training, mentoring and coaching, such as district officers, cluster leads and inspectors, remains a major challenge in the effective delivery of school and cluster-based training in Timor-Leste. Teachers and teacher educators, including INFORDEPE, need to know the content of the relevant curricula and what teaching practices make a difference for students. They also need to be able to make new knowledge and skills meaningful to teachers and manageable within the practice contexts, to connect theory and practice in ways that teachers find helpful, and to develop teacher self-regulatory inquiry skills.

## **Conclusions**

The Government of Timor-Leste supported by the international donor community should continue to prioritise the development of teacher educators, cluster leads and inspectors, as they are often overlooked in teacher professional development programmes, despite their centrality in delivering effective school-based training and ongoing professional development. In decentralizing teacher education it is also necessary to encourage transparency about the budget, build capacity at all levels of the system, and to consult all stakeholders on the distribution of responsibilities, resources and incentives. Putting in place a systematic monitoring and evaluation system with input from stakeholders across all levels of the education system will help improve accountability, planning and implementation, and assist in knowledge sharing.

Teacher education reform will also require a systemic approach to establish clear links between PRESET and INSET and an alignment of policies, plans and institutional arrangements with regard to curriculum reform, assessment practices and teacher management, so that an effective school-based teacher development programme can ultimately be implemented at a national scale. In the medium to long term, therefore, PRESET and INSET need to be brought together to ensure coherence, consistency and quality of training so that all children have access to teachers with minimal competences.

The findings of the current study on CFS training support the view that the use of school-based teacher development supported by distance learning materials (both paper-based and online) and school clusters can help close the gap between theory and practice, thereby raising the quality of teaching and learning in the nation's basic education schools. It may also require a strategic shift away from institutional-based basic teacher education towards more flexible school-based provisions which are built on the current cluster system.

In many countries in the south-east Asian region, ministries of education have been setting up INSET units with their own budgets to work through a decentralized network of provision at the national, regional and district level in order to monitor and support school-based

programmes<sup>15</sup>. Many programmes have also established local support agents to work with school directors and teachers in the schools. The decentralisation of teacher education in Timor-Leste is also in line with the broader section-wide approach to education planning promoted in the region. Such initiatives have been supported by arguments for increased governmental responsiveness, greater community participation, more flexible planning and implementation, and more efficient and less expensive provision delivered through school-based teacher development.

One of the limitations of the current utilisation focused evaluation with its emphasis on classroom processes was the lack of robust evidence on the impact of the school-based CFS training on children's learning and social and emotional wellbeing. While the general perception amongst stakeholders was that children's learning was improving as a result of the school-based training, no pre- and post-testing had been conducted during the roll out of the training to study its impact on children's learning. There is, therefore, a need to conduct a rigorous baseline evaluation as the CFS training is scaled up using an experimental or quasi-experimental design with a focus on impact as well as process.

Such rigorous forms of evaluation will help determine what works in raising the attainment of children in Timor-Leste schools, and help understand how school-based teacher development is being implemented on the ground. It will help build a more rigorous evidence base for policy makers, teacher educators and teachers in Timor-Leste about the kinds of experiences that help build capacity and bring about transformations in teaching practice and children's learning. It will also help assess their cost effectiveness against other approaches to teacher education in resource poor environments such as Timor-Leste and help strengthen the arguments for more national funding to be spent on education to develop the human capital of the country.

The starting point should always be a baseline assessment of existing classroom practices. A broad situation analysis of all factors affecting education quality and access is also highly desirable, as is an analysis of existing structures, systems and policies and plans. Too often new initiatives start at the micro level and are very seldom scaled up because they have not addressed systemic issues that need to be identified through feasibility studies, audits and baseline studies to gauge existing capacity and identify developmental inputs. Using mixed-methods approaches to conduct impact and process evaluations, combining both quantitative and qualitative data, will help in the identification of promising variables and finding out 'what works'.

Investigating the differences between learning outcomes and social and emotional wellbeing in schools where teachers have been trained in more child-friendly, interactive, participatory and inclusive approaches to teaching will help build reciprocity and pupil engagement. Such studies will also enable the development of professional benchmarks against which to evaluate and compare the status of professional development within and across the country. Longitudinal studies investigating the scale-up of national reforms to teacher education in Timor-Leste will also help build a rigorous evidence base for policy makers on the

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<sup>15</sup> Suzuki, S. and Howe, E. R. (2010). *Asian perspectives on teacher education*. London: Routledge.

sustainability, efficiency and cost effectiveness of field-based approaches compared to other forms of professional development.

This evaluation does not conclude, however, that cluster and school-based teacher development alone can address the problems faced by teachers and learners in Timor-Leste classrooms where resources are scarce and the education systems are likely to continue to face many constraints. Rather a holistic approach to building the education system in Timor-Leste is required which emphasizes capacity building and the equitable distribution of resources at national, district, cluster and school level. However, the quality of the teacher is essential to raising standards in the country's basic education schools. Systemic school-based professional development, together with management and career structures that result in consistent and high quality performance by teachers, could contribute to teachers' sense of professionalism and classroom practice, and raise educational achievement.

## **14. Recommendations**

In drawing up the recommendations, it is recognised that many will need to be implemented in the next 2 – 3 years.

### **Within the next twelve months the MOE should:**

- Commission a review of the teacher education curriculum in Timor-Leste at the PRESET and INSET stages in Timor-Leste ensure a central focus on equipping all teachers with content knowledge, pedagogical knowledge and pedagogical content knowledge.
- Set up a national INSET unit within the MOE and at district level to promote school-based INSET enhance the cluster arrangements at the sub-district level. It will also require a clear division of roles and responsibilities between national and district offices, and between district officers, directors, deputy directors and schools.
- Set up INSET units at the district level to promote the provision of school-based INSET and build stronger partnerships with schools and clusters.
- Draw up a human resource strategy to review the pay scales and promotion prospects of teacher educators to reward those who show the most competence in teaching development and support and take on curriculum leadership and administrative responsibilities for teacher education.

### **Policy on Teacher Education**

- A systemic approach to teacher education in Timor-Leste is required if all teachers are to maintain the necessary skills to ensure effective learning outcomes in classrooms. The evaluation findings suggest that there needs to be clear linkages between PRESET and INSET and an alignment of policies, plans and institutional arrangements for teacher education, so that an effective professional development programme can ultimately be implemented at a national scale. This will ensure that teacher education is part of a broader capacity development strategy that supports all actors in the education system, including, for example, directors and deputy directors, district education officers and inspectors, and that it is costed against other demands on the education system.
- A national teacher competency framework for newly qualified, experienced and expert teachers in Timor-Leste should be adopted to guide a major review of PRESET and development of INSET.
- A teacher education council should be set up under the direction of the MOE to review the teacher education curriculum and ensure greater coherence between PRESET and INSET.

- Putting in place a systematic monitoring and evaluation system with input from stakeholders across all levels of the education system will help improve accountability, planning and implementation, and assist in knowledge sharing.
- There is also the need to build a more rigorous evidence base in Timor-Leste about the kinds of experiences that help build capacity and bring about transformations in teaching practice and children's learning both to inform policy and practice and support arguments for greater funding in education. Greater use of quasi-experimental and randomised designs with baseline and post-testing of student learning, combined with systematic observation of classroom processes, will enable both impact and process evaluations of teacher training interventions.

### **Teacher Education Curriculum and Practice**

- Key issues such as multi-grade teaching, gender sensitivity, assessment for learning and special educational needs and inclusive education should be integrated into the teacher education curriculum at the PRESET and INSET stages. It should include CFS training in alternative, gender sensitive interactive approaches in whole class, group-based and one-to-one interactions which develop teachers' abilities to ask thought-provoking questions and provide high quality feedback so as to encourage sustained pupil contributions and ensure equity between boys and girl.

### **Capacity Development of Teacher Educators**

- Staff involved in the supervision of teachers at the PRESET and INSET stages, including teacher educators in INFORDEPE and NETI, school directors, deputy directors, GAT and inspectors need to be trained in the skills of mentoring, supporting and evaluating teachers. A CFS training module on mentoring for inspectors, GATs and deputy directors needs to be developed so they have the skills and knowledge to help colleagues, through discussion, guided activity and feedback, and improve their pedagogical skills through reflection on everyday professional practices. They also need to be provided with on-going continuing professional development to update their pedagogic skills and knowledge.
- As more technology becomes available to schools, videos of lessons should to be used to model and discuss effective practices with groups of teachers at the cluster and school level. Video-stimulated reflection should also be used as part of an action research cycle where teachers plan, teach, review and set clear targets for pedagogical improvements.
- A masters-level degree in Teacher Education should be developed by UNTL and NETI to raise the capacity of teacher educators and promote a culture of research.

## Annexes

### Annex 1: Terms of reference

<b>UNICEF-TLCO : TERMS OF REFERENCE (TOR)</b>
<b>Institutional Contract</b>
<b>Program/Project/Assignment Title:</b> Evaluation of Child Friendly Schools (CFS) Teacher Training Intervention under the UNICEF-Supported CFS Initiative of Ministry of Education in Timor-Leste
<b>Work Plan Code number:</b> AWP 2014, IR: 5.2, Activity ref: 5.2.1.4 : Support Eskola Foun Evaluation
<b>1. Background:</b> <p>The Government of Timor Leste (GoTL) and UNICEF Timor Leste have jointly developed and implemented a five-year Country Programme Action Plan (CPAP) for 2009-2013 (which has been extended to 2014 later on). The goal of the CPAP 2009-2013/2014 is to “contribute to the United Nations Development Assistance Framework (UNDAF) Outcome: Children, young people, women and men have improved quality of life through strengthened learning achievement.” This will be done primarily through contributing to Millennium Development Goal #2: Achieving Universal Primary Education, by affecting: 1) a 20% increase in the number of children assessing school and 2) increasing the number of children who complete school by 25%. This will also contribute to Goal #3: Promoting Gender Equality and Empowering Women.</p> <p>Under the CPAP framework 2009-2013/2014, Child Friendly Schools (CFS), known as “<i>Eskola Foun (or New School)</i>” in local language, has been an important part of the joint strategy of MOE and UNICEF to achieve these goals. To that end, MOE and UNICEF Timor Leste had consolidated and mainstreamed its previous activities carried out in the past years, and based on which in 2009 reached a consensus to start implementing a new initiative on a small scale pilot basis, “<i>Eskola Foun</i>” – a cohesive initiative that is fully owned by MOE. “<i>Eskola Foun</i>” was conceptualized with a reference to the Escuela Nueva model as well as the CFS global manual generated by UNICEF New York Headquarters in 2009<sup>16</sup>. It shares the basic tenets of the CFS principles, namely: 1) Inclusiveness; 2) Child-centeredness and 3) Democratic Participation. “<i>Eskola Foun</i>” was also made in alignment with the existing national education policies and strategies, such as Base Law for Education (2008)<sup>17</sup>. Eskola Foun (CFS) principles were then applied as a guiding strategic principle of the national sector plan (National Education Strategic Plan, NESP 2011-2030).</p> <p>An Eskola Foun baseline assessment was carried out in 2009 jointly by UNICEF and MOE (attached)<sup>18</sup>. The baselines assessment covered 21 schools across 8 districts which would receive support from the “<i>Eskola Foun</i>” initiative. The 21 schools were also selected on a purposeful sampling strategy to ensure the representativeness of sample by locality. The baseline assessment was constructed against the mentioned key CFS dimensions (inclusiveness, child-centeredness and democratic participation) and applied a mixed evaluation methods to assess the starting points of each of these schools prior to implementation of the initiative. The data collected included both quantitative and qualitative information, but no baseline data on learning achievement was gathered.</p> <p>The baseline assessment identified significant gaps to be addressed. Based on the assessment results, the assessment report also suggested a framework for future monitoring and evaluation (M&amp;E) of the “<i>Eskola Foun</i>” initiative, as well as strategies for enhancing the partnership between UNICEF and MOE to achieve the set goals. Unfortunately, the monitoring framework was never finalized and hence systematic, continuous monitoring of CFS activities have not taken place. Only limited data/information records are available for reference from the regular monitoring activities conducted by MOE and UNICEF.</p>

<sup>16</sup> UNICEF. (2009). *Child Friendly Schools Manual*. New York: Author.

<sup>17</sup> Government of Timor Leste. Law No. 14/2008. Base Law for Education.

<sup>18</sup> American Institutes for Research (AIR). (2009). *Eskola Foun in Timor Leste: Baseline Assessment, Framework for Formative Monitoring and Strategy for Engagement*. Washington, DC: Author. See the attached.

Timor-Leste introduced cluster system in 2010 for managing basic education schools. Each cluster is composed of a central basic education school with a few satellite schools (known as “filial” schools) underneath. There are 202 central basic education schools. The central basic schools are led by school directors, deputy directors and personnel responsible for administration and finance (GAT<sup>19</sup>). On the other hand filial schools are managed by school coordinators under the supervision of the school director of the central basic education school. There are district superintendents and inspectors to provide supportive supervision to the school directors/coordinators, deputy school directors, GAT and teachers for effective functioning of schools.

Since the start of the “Eskola Foun” initiative in 2009, MOE with support from UNICEF has been taking a two-fold approach in advancing the CFS/Eskola Foun principles: 1) Mainstreaming the CFS principles in the systems and policies necessary for institutionalization; and 2) Direct support to the selected target schools with concrete CFS interventions to show case successful examples. These approaches are not mutually exclusive but rather are complementary to and in alignment of each other. Some of the key achievements gained so far include:

1. Mainstreaming CFS
  - 1) Eskola Foun (CFS) principles are applied as a guiding strategic principle of the sector plan (National Education Strategic Plan, NESP 2011-2030)
  - 2) Child-centered, participatory teaching methodology was integrated into the existing in-service teacher training (2012)
  - 3) The Eskola Foun (CFS) teacher training (four modules) and Eskola Foun subject-based training (Science, Literacy and Math) were accredited as part of the MOE’s teacher training complementary course (2013)
  - 4) “Eskola Foun” (CFS) Teacher Training modules have been adopted as a MOE’s official in-service teacher training modules; and MOE has conducted the “Eskola Foun” teacher training nation-wide (including all of the basic education schools) fully covered by the MoE’s own human and financial resources in the MOE’s existing system (both 2013)
  - 5) National Quality School Standards Framework (NQSSF) for basic education (attached) has been finalized (awaiting approval of the Councils of the Ministers for implementation), which influences sector and sub-sector policy and planning for quality assurance (2014)
  - 6) “Eskola Foun” approach has been applied/mainstreamed in the ongoing curriculum reform for primary grades (Grades 1-6) as a MOE’s key strategy – including new primary curriculum, its associated revised in-service teacher training curriculum, textbooks, materials and lesson plans, etc., all of which are being finalised
  - 7) WASH in Schools guidelines has been finalized (awaiting final clearance of MOE for implementation) within the “Eskola Foun” initiative
  
2. Modeling and replicating CFS (school-level interventions)
  - 1) A total of 121 basic education schools<sup>20</sup> (10% coverage equivalent) in 13 districts have been covered in two batches (69 schools and 52 schools respectively) with all four phases of the “Eskola Foun” training<sup>21</sup>, which is delivered as school-based training. The 121 schools have also benefitted from education supplies (poster paper, crayon, story books etc.) for creating learning corners in the classrooms to support the trained teachers with the implementation of Eskola Foun.
  - 2) A total of 69 schools out of the 121 have received a school-based subject-based Eskola Foun training on Literacy, Mathematics and Science.

<sup>19</sup> Gabinete de Apoio Tecnico – technical assistance personnel

<sup>20</sup> Basic Education: Grades 1-9, free, universal and compulsory

<sup>21</sup> The CFS teacher training is composed of the four thematic phases, namely: 1) Basic Principles of CFS; 2) Child to Child Approach for School Hygiene Promotion; 3) Student and Community Participation; and 4) Advanced Methodology and Learning Guide.

- 3) All the Deputy Directors (202), GAT<sup>22</sup> (202) and Inspectors (65) have received training on School based Management, Pedagogy and CFS principles to support the CFS implementation and institutionalization in their respective responsible Cluster schools.
- 4) About 30 schools have received/are receiving support for construction / rehabilitation (classrooms and WASH facilities), as well as school furniture for children and teachers.

All the mentioned training were delivered within the MOE's existing system and structures, including the trainers from the MOE's In-service Teacher Training Institute (INFORDEPE).

In terms of the school level CFS interventions, as indicated above, except for infrastructure development, since 2009 UNICEF's support to MOE has been almost exclusively focusing on teacher training (including both general and subject-based). Although the contents of the CFS/Eskola Foun teacher training include different CFS principles, few substantial inputs apart from the teacher training delivery itself have been supported by UNICEF at the school level. The full list of the UNICEF-supported CFS schools is attached.

The most major training-related support provided by UNICEF under the Eskola Foun/CFS umbrella since 2009 include the following:

- 1) CFS/Eskola Foun teacher training and provision of relevant supply materials
  - 2) CFS/Eskola Foun subject-based training and provision of relevant supply materials; and
  - 3) CFS/Eskola Foun training for deputy directors, GAT and school inspectors, and provision of relevant supply materials
1. The CFS/Eskola Foun teacher training: The CFS/Eskola Foun teacher training is composed of four thematic phases: 1) Basic Principles of CFS; 2) Child to Child Approach for School Hygiene Promotion; 3) Student and Community Participation; and 4) Advanced Methodology and Learning Guide. Each phase takes five days to complete. INFORDEPE has developed trainers through the Training of the Trainers (ToT) in Dili, the capital of the country. Those trainers then deliver the teacher training at each school (school-based training). The training involves a combination of theoretical sessions and practical teaching-learning in the classroom. Education supplies are provided for establishing learning corners to assist the application of the child friendly approach. To date, all teachers (around over 1,400 teachers) from the target 121 schools have received the training.
  2. The CFS/Eskola Foun subject-based training: The above CFS/Eskola Foun training has been further complemented by subject-based training applying the child-centered, participatory approach on three subjects: 1) Literacy; 2) Mathematics and 3) Science. The modality of the training delivery follows the same as the CFS/Eskola training – where the ToT is conducted in Dili, followed by school-based training by the trained trainers. To date, a total of 69 schools out of the 121 are covered with the training on all of the three subjects.
  3. The training on School-based Management, Pedagogy and CFS for training of school management personnel (Deputy School Directors and GAT responsible for school administration) as well as School Inspectors to provide support to teachers and school directors to implement CFS. As for the training for GAT and Inspectors, the INFORDEPE trainers undertook the training in Dili. Training for the Deputy School Directors was conducted in each district by INFORDEPE. All the Deputy Directors (202), GAT (202) and Inspectors (65) have received the respective training.

Summary of the major training supported by UNICEF is as follows. A more detailed overview of the teacher training and training for school related staff in Timor Leste will be provided for the desk-based review.

Training	# Trained
CFS regular training	1434 teachers in 121 schools
CFS subject-based (literacy, math, science)	875 teachers
CFS regular training	121 school directors and deputy directors (UNICEF target schools)
CFS training and training on school-based management	202 Basic Education Centre deputy school director (nation-wide)
	202 GAT (technical assistance personnel) (nation-wide)
	65 school inspectors and 13 District Education Superintendents
Training and teaching-learning materials	121 schools

## 2. Rationale of evaluation

The current country programme (2009-2014) will come to an end in December 2014. Both MOE and UNICEF have acknowledged the shortage of data to duly measure the effectiveness of the CFS teacher training which has been supported by UNICEF in the current country programme, and jointly agreed on the need and usefulness of commissioning an evaluation to generate related evidence. MOE has expressed its strong interest to take the recommendations from the CFS teacher training evaluation for further improvement of relevant sector policies, strategies and teacher training contents etc. in future. The findings and recommendations from the evaluation will also provide strategic direction to UNICEF in determining its focus areas of support to MOE for mainstreaming of CFS principles in the basic education sector in Timor-Leste under the next country programme (2015-2019).

## 3. Purpose of the evaluation

The purpose of the evaluation is to inform decisions on operations, policy and strategy for the improvement and enhancement of the MOE's CFS/Eskola Foun teacher training programme interventions. In this sense, the nature of the proposed evaluation will be defined to be more of a **formative evaluation** than that of a summative evaluation.

The evaluation results will be used to inform the relevant sector policies, plans and strategies in general, as well as teacher training systems and contents more specifically, for further improvement and enhancement. The evaluation results will also provide strategic guidance to UNICEF in determining its focus areas of support to MOE for mainstreaming of CFS principles in the basic education sector in Timor-Leste under the next country programme (2015-2019). The users of the evaluation will be:

- Ministry of Education of Democratic Republic of Timor-Leste. Especially the relevant Directorates of MoE, including not limited to: National Directorate of Basic Education, Pre-school Education, Curriculum, Social Action, Planning and Finance,

Human Resources, National Teacher Training Institute (INFORDEPE), Office of Inspector General, District Education Authorities and other relevant ministries/government institutions

- UNICEF Timor-Leste Country Office which includes Education Section and all other related sections; UNICEF Regional Office and Headquarters
- Development partners in the education sector: UN agencies, international and bi-lateral organizations, NGOs, CSOs.

#### **4. Objectives of the evaluation**

The key objectives of the evaluation are:

- To assess the effectiveness, relevance, sustainability and efficiency of the UNICEF-supported MOE's CFS/Eskola Foun training
- To draw recommendation for further improvement of relevant sector policies, plans, strategies and operations of the CFS/Eskola Foun teacher training programme interventions for CFS scaling up component
- To provide strategic guidance to UNICEF in determining its focus areas of support to MOE for mainstreaming of CFS principles in the basic education sector in Timor-Leste under the next country programme (2015-2019).

#### **5. Scope of Evaluation:**

The evaluation will focus on the following:

- Sub-sector: Basic Education (primary and pre-secondary, Grades 1-9)
- Geographical scope: 121 CFS s in 13 districts in Timor Leste
- Intervention: CFS/Eskola Foun training interventions supported by UNICEF: 1) CFS/Eskola Foun teacher training (four phases training + learning corner and other relevant supply materials); 2) CFS/Eskola Foun subject-based training and relevant supply materials; and 3) CFS training for deputy directors, GAT and school inspectors, and relevant supply materials
- Implementation period of the CFS training interventions: 2009 to 2014
- Regulatory framework: GoTL-UNICEF Country Programme and Country Programme Action Plan 2009-2014; relevant sector policies, plans, and strategic and legal documents of the Government and the Ministry of Education of Timor Leste; relevant plans of other key actors

#### **6. Evaluation criteria and evaluation questions:**

In relation to the above mentioned three key objectives of the evaluation, the following questions will need to be addressed against the below five criteria. The below questions will be applied in each of the three interventions to be examined respectively: 1) CFS/Eskola Foun Training; 2) CFS/Eskola Foun subject-based training and 3) CFS/Eskola Foun training for deputy directors, GAT and school inspectors.

##### **1. Effectiveness:**

- **To what extent have results at the output and outcome levels been achieved?**
- **What are the reasons for the achievement or non-achievement of the objectives set?**
- **What can be done to make the interventions more effective?**

##### **More specific questions include:**

CPAP output level (see the attached CPAP results matrix)

- To what extent have changes occurred in the target CFSs against the baseline survey in Inclusiveness, Child-centered and Democratic Participation?
  - To what extent do the teachers have the required content knowledge of literacy, mathematics and science?

- To what extent do they understand the rationale for using child-centered, interactive and inclusive teaching and learning methodologies in the classroom?
- To what extent do teachers employ participatory, interactive and inclusive teaching methodologies in their teaching?
- To what extent and how are the learning corner materials used by teachers and students for teaching-learning
- To what extent do teachers have the knowledge and skills to facilitate: 1) hygiene promotion through child-to-child approach; 2) student participation through student council; and 3) community participation through Parent Teacher Association (PTA)?
- To what extent do they apply this knowledge and skills?
- To what extent do school directors demonstrate an understanding of leadership and management skills?
- To what extent do school directors apply these skills and competences in their practice?
- To what extent do school directors, deputy directors, GAT and Inspectors have the knowledge and skills to conduct supportive supervision?
- To what extent do they apply these competences and skills in practice?
- To what extent have each of the identified changes been influenced by the relevant training interventions supported by UNICEF?

#### CPAP outcome level

- To what extent have the expected outcomes been achieved in the target schools:
  - 1) 20% increase of children (girls and boys) enrolled in free compulsory quality basic education
  - 2) 25% increase of children (girls and boys) completing free compulsory quality basic education
- To what extent can changes identified have been influenced by the UNICEF-supported training interventions?
- What other interventions or circumstances may have had a critical effect?

#### Other effects

- What are the intended and unintended, positive and negative, effects of the training interventions on school directors and coordinators, deputy directors, GAT, teachers, students and school inspectors?
- Has each of the modalities utilized for the training interventions brought its maximum effects in reference to the existing Cluster system? Are there any differences in the effects between central basic education schools and filial schools?
- What are the effects of the training interventions on the MOE? To what extent did the training interventions contribute to capacity development and the strengthening of the MOE as institution?

#### **2. Relevance:**

- **To what extent are the CFS/Escola Foun approach and interventions still relevant to country's priority needs and to UNICEF's refocused agenda on equity?**

#### **More specific questions include:**

- Are the training interventions consistent with the needs and conditions of the direct beneficiaries' groups – including children, parents, teachers, school directors/coordinators, deputy directors, GAT and school inspectors?
- Are the training interventions well in tune with the sector priorities and other relevant policies, plans, standards and strategies and administrative systems of the Government/MOE at national and district levels?
- Are the training interventions a technically adequate solution to address the key bottlenecks of the basic education sub-sector?
- What other key interventions may be required to enhance effectiveness in future?

### **3. Sustainability:**

#### ➤ **To what extent are the CFS/Escola Foun approach and interventions sustainable?**

##### **More specific questions include:**

- Are the interventions consistent with the MOE's priorities and well integrated with local social and cultural conditions?
- Are requirements of local ownership satisfied? Did MOE and other key stakeholders participate in the planning and implementation of the interventions?
- Are the technology and the modality utilized in the training interventions appropriate to the economic, educational and cultural conditions of Timor Leste?
- Do the proposed interventions have a potential for replication?
- Do the Government / MOE of Timor Leste have the financial and human resource capacity to maintain the benefits from the interventions when support by development partner has been withdrawn?

### **4. Efficiency:**

#### ➤ **To what extent are the CFS/Escola Foun approach and interventions efficient?**

##### **More specific questions include:**

- Have the training interventions been managed with reasonable regard for efficiency? What measures have been taken during planning and implementation to ensure that resources are efficiently used?
- Could the training intervention have been implemented with fewer resources without reducing the utility and quantity of the results?
- Could more of the same results have been produced with the same resources? Could an altogether different type of intervention have solved the same bottlenecks but a lower cost?
- Were the interventions economically worthwhile, given possible alternative uses of the available resources? Should the resources allocated to the interventions have been used for another, more worthwhile purpose?

### **5. Equity, Gender Equality and Human Rights based Approach (HRBA):**

- How well were equity, HRBA and gender equality goals and processes incorporated into the planning documents and resource materials of the teacher training interventions? How well did the teacher training interventions succeed in involving women and men, and rights holders (children specially the most marginalized group) as well as duty bearers (parents, teachers, trainers, supervisors of teachers, district and national level MoE personnel)?
- To what extent did the different groups, including the most marginalized children benefit in different ways from the training interventions?

## **7. Methodology**

The evaluation will be of a forward-looking, formative evaluation nature, and hence a utilization-focused approach will be applied.

In principle, a mixed-methods approach is suggested for this evaluation. A mixed-methods approach will include the systematic use of qualitative (e.g., structured interviews and focus groups) and quantitative (e.g., surveys, rated school and classroom observations, extant student data) methods. The earlier-mentioned baseline assessment conducted in 2009 developed the following six quantitative and qualitative instruments which will need to be reviewed and adapted/utilized for the evaluation as appropriate:

- School Climate and Connectedness Surveys for school directors/coordinators, teachers and students
- School observation protocols

- Focus group discussion protocol for teachers
- Focus group discussion protocol for parents and community members
- In-depth interview protocol for school directors
- In-depth interview protocol for relevant Ministry officials

An initial proposal for a more detailed methodology is to be submitted by applicant institutions at the time of bid application, which will be used as a basis for technical proposal assessment by MoE and UNICEF. Afterwards, the contracted institution will be requested to develop a more holistic inception report. The inception report should further elaborate a detailed, specific methodological approach, design for the evaluation, and the data collection and analysis methods and tools, including sampling plans, to sufficiently address all evaluation questions. The inception report should also include a workplan.

The existing information sources include, but are not limited to:

- Existing key Government/MoE documents, including GoTL/MoE policies and plans, legal framework and standards, etc.
- Existing data from the Government/MoE, including Education Management Information System (EMIS) and other studies, such as DHS and Census 2010
- Relevant UNICEF global, regional and country-specific documents, including GoTL-UNICEF Country Programme and Country Programme Action Plan (CPAP)
- Key relevant developments (policies and plans) from other development partners
- Relevant CFS/Eskola Foun-specific documents, including the baseline survey and training manuals

The evaluation will involve a desk-based review of available documents/literature, school visit/classroom observation, in-depth interviews and focus group discussions with key stakeholders, consultation meetings and interviews with key informants of the relevant ministries/departments of the Government, UNICEF and other development partners.

The key stakeholders include:

- Ministry of Education (MOE)
  - ❖ National level (not limited to): National Directorate of Basic Education, National Teacher Training Institute (INFORDEPE) and their trainers, Office of Inspector General, National Directorate of Pre-school Education, Curriculum, Social Action, Planning and Finance, Human Resources, etc.
  - ❖ Local level: children, parents, teachers, school directors / coordinators, district superintendents, inspectors, district education authorities
  - ❖ Former CFS working group members who were engaged in the teacher training package development and implementation
- Other relevant ministries/government institutions
- UNICEF Timor-Leste Country Office which includes Education Section and all other related sections; UNICEF Regional Office and Headquarters
- Key development partners in the education sector: UN agencies, international and bi-lateral organizations, NGOs, CSOs, etc.

#### **8. Estimated Budget as per Work Plan:**

Activity ref: 5.2.1.4 : Support Eskola Foun Evaluation

#### **9. Duty station:** Combination of in-country and distance service

**10. Indicative assignment dates:** Over the period of 01 Nov 2014 – 30 March 2015 (84 working days= 27 days in country in Timor-Leste + 57 days from a distance out of country)

#### **11. Management and Oversight:**

The Chief of Education with support from the Chief of PME of UNICEF Timor-Leste will play the role of the evaluation manager. UNICEF Regional Office will take the responsibility of oversight and provide technical support. The evaluation manager oversees the whole process along with the MOE in coordination with UNICEF Regional Office, including: developing ToR, recruiting the evaluation

team, presiding over the reference group, controlling the evaluation quality, approving the reports, carrying out the dissemination and ensuring the follow-up of the recommendations.

An evaluation reference group will be formed with members from MOE, UNICEF and other key partners. The reference group is chaired by the evaluation manager and assists him/her in monitoring and supervising the evaluation, including: discussing and clearing the ToR, sharing available information, validating the evaluation questions, commenting on draft reports, assisting with feedback on the findings and making recommendations.

The institution engaged for the evaluation will be responsible for refinement of evaluation questions as deemed appropriate, methodology, data collection and analysis as well as the formulation of findings and conclusions containing judgments in response to the evaluation questions. Recommendations and lessons will also be included in the report.

The consultants should adhere to [UNICEF’s Evaluation Policy](#); to [UNEG’s ethical guidelines for UN evaluations](#); and to [UNICEF Reporting Standards](#).

**11.. Description of assignment:**

Tasks	End Product/deliverables	Time frame
1. Participate in a briefing session on the assignment with MOE and UNICEF (through skype call; outside country)	Meeting record	1 day (in distance)
2. Review and analyze the relevant documents, reports, materials (outside country)	A summary note on key findings from the documentation review which will be part of the Inception Report and will be used as secondary information for the evaluation, as well as basis for defining the methodological approach, design for the evaluation, and the data collection and analysis methods, including sampling plans.	5 days (in distance)
3. Preparation of an Inception Report that will (re) construct a Theory of Change of the Intervention (TOC); The Inception Report will unfold the ToR including evaluation design; methodology, sampling plans, tools for primary and secondary data collection and analysis, timelines for these activities, etc.; it is also expected that the inception report will provide	Inception report detailing the methodological approach, evaluation design, the key evaluation questions, and data collection and analysis methods and tools, data sources/respondents, tools, formats, guidelines in place, validated by the reference group and approved by MOE and UNICEF  Detailed action plan with specific dates and assignment outputs	15 days= 5 days for preparation of study methodology + 5 days for tools development + 5 days for finalization of design and tools with MOE and UNICEF (in distance)

feedback to the evaluation questions and scope (outside country). The inception report should also include a work plan.		
4. Field visit and collection of primary and secondary information from the key informants (in country)	Data collected from primary and secondary sources on the identified evaluation questions	21 days (in country)
5. Data entry and cleaning; analysis of collected information and data; and draw evidence-based findings and conclusions (outside country)	Draft analysis of facts and evidence information and write-up on analytical findings ready for report preparation	21 days (in distance)
6. Draft the evaluation report to answer the key evaluation questions in consultation with UNICEF and MoE (outside country)	Draft evaluation report	15 days (in distance)
7. Presentation of the draft findings, conclusions, recommendations and lessons to the stakeholders and incorporate inputs into the draft report (in country)	Presentation on the draft evaluation report; feedback from the stakeholders (incl MOE, UNICEF and the reference group) incorporated	5 days (in country)
8. Submit the final report to MOE and UNICEF (in country)	Final report after incorporation of comments and suggestion received, which is compliant with the UNICEF-Adapted UNEG Evaluation Report Standard as well as approved by MOE and UNICEF	1 day (in country)
<p><b>8. Qualifications or specialized knowledge/experience required for the assignment:</b></p> <p>Credible international institutions with proven records of similar programme evaluations in the basic education sector in developing countries, are encouraged to apply. Their applications should demonstrate:</p> <ul style="list-style-type: none"> <li>a) Rigorous expertise and relevant experiences in conducting evaluations which are relevant to teacher training at basic education level, especially those in developing countries</li> <li>b) Evidence of past work , profiles, current resume and relevant available reports to substantiate their claims to be competent to manage the assigned tasks</li> </ul>		

- c) Commitments to deliver the final products in line with the set TOR within the agreed timeline
- d) Conformity to the UN evaluation standards and norms including ethical requirements

**Chargeable Budget Code for this Activity:** SC110277

**Proposed Payment schedule based on deliverable:**

- First Payment (20%): Upon timely submission of the Inception Report approved by MoE and UNICEF
- Final payment (80%): Upon timely submission of the final report approved by MoE and UNICEF

UNICEF will not settle any payments unless the consultancy institution accomplishes all the tasks in a timely manner.

**Consultant's Work Place:**

The consultancy institution will be responsible for finding its own working place when outside the country. When in country, the consultants will work at UNICEF Timor Leste. UNICEF will support the costs related to workshops, interpretation and translations as required.

**Nature of "Penalty Clause" to be Stipulated in Contract**

UNICEF will not settle any payments unless the consultant accomplishes all the tasks in a timely manner as specified.

## Annex 2: Evaluation Questions

Evaluation questions	Sources of evidence	Data collection methods
<p><b>Relevance:</b></p> <p>Are the CFS interventions meeting the needs of children, parents, teachers, schools leaders and of education officers providing external support to the schools?</p> <p>To what extent are the CFS interventions relevant to the country's education sector education reforms?</p> <p>To what extent are the CFS interventions relevant to UNICEF's latest priorities on educational equity, gender equality and human rights?</p>	<p>Parents/PTAs SMCs School directors Deputy directors Cluster heads School inspectors District Education Superintendents National MOE officers UNICEF country officers Donor agencies NGOs</p>	<p>Classroom observations Semi-structured interviews Focus groups Document analysis EMIS data DHS and census data</p>
<p><b>Effectiveness:</b></p> <p>To what extent do teachers employ participatory, interactive and inclusive teaching methods following the CFS interventions?</p> <p>To what extent have the subject specific programmes improved subject content knowledge?</p> <p>How have the CFS interventions improved student learning?</p> <p>How have the CFS interventions improved school hygiene approaches?</p> <p>To what extent have the CFS interventions improved pupil and parent participation in the life of the schools?</p> <p>How effective are the CFS interventions in raising the attainment of the most vulnerable and disadvantaged pupils?</p>	<p>Teachers Pupils Parents/PTAs School Management Committees (SMCs) School directors Deputy directors Cluster heads School inspectors District Education Superintendents National MOE officers UNICEF country officers Donor agencies NGOs</p>	<p>Classroom observations Semi-structured interviews Focus groups School enrolment and completion data EMIS data EGRA data DHS and census data Document analysis</p>

<p>To what extent have the interventions improved the leadership and management of schools?</p> <p>To what extent have the CFS interventions improved the external support provided to schools by directors, GAT and inspectors?</p> <p>What are the challenges in implementing the different elements of the CFS training?</p> <p>How consistently are the CFS strategies implemented?</p>		
<p><b>Efficiency:</b></p> <p>How efficiently were the resources deployed for implementing the training at the district, cluster and school level?</p> <p>How cost-effective were the CFS interventions compared to other forms of in-service training?</p>	<p>Financial data SMCs School directors Deputy directors Cluster heads School inspectors District Education Superintendents National MoE officers UNICEF country officers Donor agencies</p>	<p>Semi-structured interviews Cost benefit analysis Focus groups Document analysis EMIS data DHS and census data</p>
<p><b>Sustainability:</b></p> <p>How have the CFS interventions been successfully embedded in the schools?</p> <p>To what extent can the CFS interventions be scaled up at a regional and national level?</p> <p>How can the long-term impact of the CFS interventions be sustained by the MOE once development partners withdraw funding?</p> <p>What additional support is needed to make the CFS interventions work well?</p>	<p>Financial data SMCs School directors Deputy directors Cluster heads School inspectors District Education Superintendents National MoE officers UNICEF country officers Donor agencies</p>	<p>Semi-structured interviews Cost benefit analysis Focus groups Document analysis EMIS data DHS and census data</p>
<p><b>Equity, gender, equality and human right:</b></p>	<p>Teachers</p>	<p>Classroom observations</p>

<p>To what extent are the CFS interventions addressing the needs of the most marginalised, vulnerable and disadvantaged students?</p> <p>To what extent are the CFS interventions promoting equity, gender equality and human rights?</p>	<p>Pupils  Parents/PTAs  School Management Committees (SMCs)  School directors  Deputy directors  Cluster heads  School inspectors  District Education Superintendents  National MOE officers  UNICEF country officers</p>	<p>Semi-structured interviews  Focus groups  School enrolment and completion data  EMIS data  EGRA data  DHS and census data  Document analysis</p>
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## **Annex 3: List of documents / materials for CFS Teacher Training Evaluation**

### **A. General Guidelines and documents**

1. Child Friendly Schools Manual, UNICEF, New York, 2009

### **B. Timor-Leste Country Specific Documents:**

1. GoTL / MOE documents
  - Timor-Leste Strategic development Plan (SDP) 2011-2030
  - National Education Strategic Plan (NESP) 2011-2030
  - MOE Five Year Plan
  - MoE Annual Action Plan
  - Financial and Human Resource related information
  - MOE-UNICEF annual work plans for 2009 – 2014
  - MOE Economic Efficiency Assessment
  - Base law for Education 2008
  - Decree Law 2010 Legal Regime for administering and managing the basic education system
  - Decree Law 2013 Organic law of MOE
  - Teacher Competency Framework
  - 2014 Base Curriculum Laws for pre-school and basic education
  - National Inclusive Education Policy (draft)
  - WASH in Schools Guidelines (draft)
  - Draft National Quality School Standard Framework for Basic Education, Timor Leste 2014
  - List of reference materials for developing NQSSF
2. UNICEF related documents
  - a. Country Programme Action Plan (CPAP) for 2009-2014
  - b. UNICEF Annual Reports each year of 2009 - 2013
  - c. Donor Reports relevant to CFS (SIDA)
  - d. Expenditure Information for CFS from 2009 – 2014 by activity / item (FUR reports / DCT liquidation reports)
  - e. Country Programme Document 2015-2019
  - f. Eskola Foun in Timor Leste : Baseline Assessment, Framework for Formative Monitoring and Strategy for Engagement by American Institutes for Research 2009
  - g. Eskola Foun : An Appreciative Enquiry on Child Friendly Schools in Manatuto, Timor-Leste, 2013
3. Any other data and studies
  - a. Situation Analysis of Children in Timor-Leste, 2014
  - b. Education Survey (WB/AusAID)
  - c. EGRA (WB)
  - d. Mother-Tongue Pilot Baseline Survey
  - e. Systems Approach for Better Education Results by World bank 2013
  - f. EMIS data
  - g. Demography and Health Survey (DHS) 2009

h. Census 2010

**C. Existing CFS Training Materials of MOE-UNICEF:**

1. Eskola Foun Practical Hand Book (Phase 1 Training)- 2010
2. Eskola Foun Handbook for Child to Child for Training of Trainers (Phase-2)- 2011
3. Eskola Foun Handbook for teachers for students and community participation (Phase-3)- 2010
4. Eskola Foun Training Manual at School (Phase 4): Advanced Methodology Learning Guide 2010
5. School Based Management Manual for School Directors 2009 (DRAFT?)
6. IG Training Manual
7. List of materials provided by UNICEF, including “learning corner” materials, training materials etc.
8. Revised Basic Education Curriculum
9. Draft School level Basic Education Training Manual 2014
10. Any available document / information on training activities of MOE

## Annex 4: Timeline Systematic Observation Schedule

### CLASSROOM OBSERVATION RECORD: 5 MINUTE INTERVALS

<b>Observer:</b>	<b>Date:</b>
School:	Township:
<b>Lesson start time:</b>	<b>Lesson end time:</b>
<b>Subject</b>	<b>Grade:</b>
<b>No. of boys present:</b>	<b>No. of girls:</b>
<b>No. of boys absent:</b>	<b>No. of absent:</b>
<b>Lesson topic:</b>	
<b>Language(s) of instruction:</b>	

For each FIVE MINUTE section of the lesson, please record on the checklist the main teaching and learning activities you observe. Please use the note section to record activities NOT covered in the checklist and to provide further contextual information on your observations.

Where code switching between languages takes place, please record this in the notes section.

#### Time - 1 to 5 minutes

#### Notes

MAIN ACTIVITY(IES)		
1. Teacher explanation/question & answer		
2. Teacher rote/chorus responses		
3. Teacher writing on chalk board		
4. Pupils working from chalk board		
5. Teacher reading to whole class		
6. Pupil reading to whole class		
7. Pupils working from textbooks		
8. Pupils working in pairs/groups		
9. Pupil demonstrating to class		
10. Teacher reviews lesson topic		
11. Teacher marking work		
12. Class management		
13. Class administration		
14. Interruption to lesson		
15. Pupils off-task		

#### Time - 6 to 10 minutes

#### Notes

MAIN ACTIVITY(IES)		
1. Teacher explanation/question & answer		
2. Teacher rote/chorus responses		
3. Teacher writing on chalk board		
4. Pupils working from chalk board		

5. Teacher reading to whole class		
6. Pupil reading to whole class		
7. Pupils working from textbooks		
8. Pupils working in pairs/groups		
9. Pupil demonstrating to class		
10. Teacher reviews lesson topic		
11. Teacher marking work		
12. Class management		
13. Class administration		
14. Interruption to lesson		
15. Pupils off-task		

**Time - 11 to 15 minutes**

**Notes**

<b>MAIN ACTIVITY(IES)</b>		
1. Teacher explanation/question & answer		
2. Teacher rote/chorus responses		
3. Teacher writing on chalk board		
4. Pupils working from chalk board		
5. Teacher reading to whole class		
6. Pupil reading to whole class		
7. Pupils working from textbooks		
8. Pupils working in pairs/groups		
9. Pupil demonstrating to class		
10. Teacher reviews lesson topic		
11. Teacher marking work		
12. Class management		
13. Class administration		
14. Interruption to lesson		
15. Pupils off-task		

**Time - 16 to 20 minutes****Notes**

<b>MAIN ACTIVITY(IES)</b>		
1. Teacher explanation/question & answer		
2. Teacher rote/chorus responses		
3. Teacher writing on chalk board		
4. Pupils working from chalk board		
5. Teacher reading to whole class		
6. Pupil reading to whole class		
7. Pupils working from textbooks		
8. Pupils working in pairs/groups		
9. Pupil demonstrating to class		
10. Teacher reviews lesson topic		
11. Teacher marking work		
12. Class management		
13. Class administration		
14. Interruption to lesson		
15. Pupils off-task		

**Time - 21 to 25 minutes****Notes**

<b>MAIN ACTIVITY(IES)</b>		
1. Teacher explanation/question & answer		
2. Teacher rote/chorus responses		
3. Teacher writing on chalk board		
4. Pupils working from chalk board		
5. Teacher reading to whole class		
6. Pupil reading to whole class		
7. Pupils working from textbooks		
8. Pupils working in pairs/groups		
9. Pupil demonstrating to class		
10. Teacher reviews lesson topic		
11. Teacher marking work		
12. Class management		
13. Class administration		
14. Interruption to lesson		
15. Pupils off-task		

**Time - 26 to 30 minutes****Notes**

<b>MAIN ACTIVITY(IES)</b>		
1. Teacher explanation/question & answer		
2. Teacher rote/chorus responses		
3. Teacher writing on chalk board		
4. Pupils working from chalk board		
5. Teacher reading to whole class		
6. Pupil reading to whole class		
7. Pupils working from textbooks		
8. Pupils working in pairs/groups		
9. Pupil demonstrating to class		
10. Teacher reviews lesson topic		
11. Teacher marking work		
12. Class management		
13. Class administration		
14. Interruption to lesson		
15. Pupils off-task		

**Time - 31 to 35 minutes****Notes**

<b>MAIN ACTIVITY(IES)</b>		
1. Teacher explanation/question & answer		
2. Teacher rote/chorus responses		
3. Teacher writing on chalk board		
4. Pupils working from chalk board		
5. Teacher reading to whole class		
6. Pupil reading to whole class		
7. Pupils working from textbooks		
8. Pupils working in pairs/groups		
9. Pupil demonstrating to class		
10. Teacher reviews lesson topic		
11. Teacher marking work		
12. Class management		
13. Class administration		
14. Interruption to lesson		
15. Pupils off-task		

## Annex 5: Frequency of teaching and learning behaviours schedule

The purpose of this observation schedule is to evaluate patterns of teacher–pupil interaction currently used in Timor-Lest basic education schools. The observation schedule is informed by pedagogical research and focuses on what can be observed in the act of teaching (i.e. task, activity, interaction, assessment) so as to collect data on classroom processes that are as valid and reliable as is practically possible.

**Observer’s name:**

### A. General Information

Name of school:

District:

Date:

Type of school:

### B. Details of Lesson Observation

Teacher’s name:

Class:

Subject:

Start Time:

End Time:

No. of boys present:	No. of girls present:
No. of boys absent:	No. of girls absent:

Lesson topic:

### C. Child Friendly School training

Training	Please tick if teacher attended training ✓
CFS regular training	
CFS subject-based (literacy, math, science)	
Training and teaching learning materials	

### C. Scheme of Work

Is there a scheme of work? Yes/no (please circle)

Using the following scale, please indicate the quality of the scheme of work:

1 = unsatisfactory, 2 = satisfactory, 3 = good, 4 = very good

Clarity of learning objectives	1	2	3	4
Sequencing of lessons	1	2	3	4
Range of teaching and learning activities	1	2	3	4
Use of instructional materials	1	2	3	4
Assessment of learning	1	2	3	4

### D. Lesson Planning

Is there a lesson plan? Yes/no (please circle)

Using the following scale, please indicate the quality of the lesson plan:

1 = unsatisfactory, 2 = satisfactory, 3 = good, 4 = very good

Clarity of learning objectives	1	2	3	4
Lesson timeline	1	2	3	4
Range of teaching and learning activities	1	2	3	4
Use of instructional materials	1	2	3	4
Assessment of learning	1	2	3	4
Setting of homework (if appropriate)	1	2	3	4

### E. Use of Textbooks

Pupil-textbook ratio in classroom: ..... / .....

Condition of textbooks (tick one box and comment if appropriate)

Good	Satisfactory	Poor

## F. Condition of the Classroom

Using the following scale, please indicate the quality of the classroom environment:

1 = unsatisfactory, 2 = satisfactory, 3 = good, 4 = very good

Condition of classroom building (i.e. walls, floor, ceiling and windows)	1	2	3	4
Space available in the classroom	1	2	3	4
Availability and condition of desks and seats	1	2	3	4
Classroom lighting	1	2	3	4
Ventilation	1	2	3	4
Condition of chalk board	1	2	3	4
Classroom displays	1	2	3	4

## G. Professionalism of the Teacher

Using the following scale, please indicate the quality of the teacher's professional approach:

1 = unsatisfactory, 2 = satisfactory, 3 = good, 4 = very good

Teacher's professional appearance	1	2	3	4
Teacher's punctuality and time keeping	1	2	3	4
General manner of teacher (i.e. confidence, commitment, communication)	1	2	3	4

## H. Judging the quality of Teaching and Learning

In order to judge the quality of teaching and learning, this section focuses on the **observable practices** that are going on in the lesson.

Before observing the lesson, the assessor should familiarise him/herself with the key behaviours. Please refer to the descriptors on pages 6 to 9 when applying the following judgements:

**1 = behaviour never observed**

**2 = behaviour rarely observed (i.e. once or twice)**

**3 = behaviour occasionally observed (i.e. 4 or 5 times)**

**4 = behaviour consistently observed**

### Section 1: Demonstrating skills in lesson introduction and development

1. Teacher clearly states objectives and activities to be covered and refers to them throughout lesson	1	2	3	4
2. Teacher checks for prior knowledge	1	2	3	4

3. Teacher explains material accurately and clearly	1	2	3	4
4. Teacher code switches during course of lesson (e.g. from Portuguese to Tetum)	1	2	3	4
5. Teacher emphasises key points of the lesson	1	2	3	4
6. Teacher uses a range of instructional materials	1	2	3	4
7. Teacher makes effective use of chalk board	1	2	3	4
8. Teacher exhibits personal enthusiasm	1	2	3	4
9. Teacher displays a positive tone by using encouragement rather than criticism	1	2	3	4
10. Teacher knows and uses pupil names	1	2	3	4
11. Teacher encourages equal participation of girl and boy pupils	1	2	3	4
12. Teacher uses paired or group work to encourage active participation of pupils	1	2	3	4
13. Teacher uses peer tutoring where a more knowledgeable pupil tutors another pupil	1	2	3	4
14. Teacher arranges classroom layout to facilitate learning of all pupils	1	2	3	4
15. Teacher moves around classroom to interact with individual pupils	1	2	3	4
16. Teacher uses session to summarise, consolidate and extend learning	1	2	3	4

## **Section 2: Demonstrates skills in questioning**

17. Teacher uses cued elicitation for the drilling of facts, ideas and routines through repetition	1	2	3	4
18. Teacher asks closed questions requiring pupils to recall or repeat information	1	2	3	4
19. Teacher asks open-ended questions	1	2	3	4
20. Teacher calls on pupils to answer questions individually	1	2	3	4
21. Teacher provides equal opportunities for both girl and boy pupils to answer questions	1	2	3	4
22. Teacher asks pupils to demonstrate in front of class	1	2	3	4
23. Pupils with special educational needs identified and included in teacher questioning	1	2	3	4

## **Section 3: Demonstrating skills in feedback**

24. Teacher evaluates pupil answers	1	2	3	4
25. Teacher probes pupil answers	1	2	3	4
26. Teacher comments on pupil answers	1	2	3	4
27. Teacher builds pupil answers into subsequent questions	1	2	3	4

28. Teacher encourages pupils to ask questions	1	2	3	4
29. Teacher provides equal amounts of feedback to both girls and boys	1	2	3	4
30. Teacher moves around to interact with pupils to provide spoken and/or written feedback to inform learning	1	2	3	4

**Section 4: Demonstrating skills in classroom management**

31. Teacher relates well to learners	1	2	3	4
32. Teacher effectively manages the class	1	2	3	4
33. Teacher effectively manages lesson time	1	2	3	4

## Observation Descriptors

### Demonstrating skills in lesson introduction and development

#### Statement

1. The teacher clearly states objectives and gives clear overview of lesson

2. The teacher checks for prior knowledge

3. The teacher explains material accurately and clearly

4. Teacher code switches during lesson

5. The teacher emphasises key points throughout the lesson

6. Teacher uses a range of instructional materials

7. Teacher makes effective use of chalk board

8. Teacher exhibits personal enthusiasm

9. The teacher displays a positive tone by using encouragement rather than criticism

10. Teacher knows and uses pupil names

11. Teacher encourages equal participation of both girl and boy pupils

12. Teacher uses paired or group work to encourage pupil participation

#### Descriptor

Learning objectives are incorporated into a lesson plan and clearly stated at the beginning and various stages of a lesson

Teacher summarises what has been learnt at various stages throughout the lesson

Teacher asks pupils about previous work covered in the topic and questions them about their understanding

Teacher explanation is accurately and clearly presented with good signposting and makes strong connections to pupil experience

Good examples, analogies, visual aids or other devices used to help the pupils understand

Teacher switches from one language to another during course of lesson to aid pupil understanding e.g. from Portuguese to Tetum or mother tongue)

The teacher summarises what has been learnt at various stages throughout the lesson

Instructional aids, such as maps, tables, posters, pictures and charts, are clearly displayed so that all pupils can see and use them

Teacher makes effective use of teacher's guide/textbook

Teacher's writing and diagrams are clear and effectively laid out

Teacher conveys enthusiasm through voice and body language

Teacher uses encouragement and praise to give positive feedback

Teacher does not shout, make, hurtful/embarrassing/humiliating remarks or use corporal punishment

Teacher calls on pupils by name to make a contribution to the lesson

Girl and boy pupils play an equal part in all stages of the lesson and are asked to lead on a range of activities

Activities requiring pupil-pupil interaction are built into lesson

Pupils are clear about the purpose and outcomes of the paired or group work

Pupils are trained in how to work in groups (e.g. how to ask questions, listen and respond to each other)

13. Teacher uses peer tutoring where a more knowledgeable pupil tutors another pupil

Activities requiring peer tutoring are built into lesson

Pupils are clear about the purpose and outcomes of the peer tutoring

Pupils are trained in how to tutor (e.g. how to ask questions, listen and respond to answers)

14. Teacher arranges classroom lay-out to facilitate learning of all pupils

Class is organised to facilitate group work/ peer tutoring when used

Seating in the classroom does not discriminate against girls/boys by placing them further from the teacher

1. Teacher moves around classroom to interact with individual pupils

Teacher engages with individual pupils

16. Teacher uses session to summarise, consolidate and extend learning

Teacher uses plenary session to draw the whole class together, during and at the end of the lesson, to summarise, consolidate and extend what has been covered and direct pupils to the next stage of learning

## Demonstrating skills in questioning

17. Teacher uses cued elicitation for the drilling of facts, ideas and routines repetition

Teacher uses a mid-sentence rise in voice intonation to get a response from the pupils during an explanation or through following a pupil answer

The answer, usually in the form of a choral answer, takes the form of a repetition or completion of a phrase or word initiated by the teacher

18. Teacher asks closed questions requiring pupils to recall memorised information

Teacher asks test questions calling for a single 'yes/ no' answer or offering facts

19. The teacher asks open-ended questions

Teacher asks questions to which there is more than one answer

Teacher asks questions which encourage speculation and require more than a 'yes' or 'no' answer or the recall of information

20. The teacher calls on pupils individually to answer questions

Teacher encourages individual rather than choral responses to question

Teacher ensures all pupils have a chance to respond to a question

21. Teacher provides equal opportunities for both girls and boys to answer questions

The distribution of questions and time given to nominated pupil answers is roughly equal to the gender make-up of the class

22. Teacher asks pupils to demonstrate in front of class

Teacher calls on pupils to answer questions, explain ideas and report back on activities in front of class

23. Pupils with special educational needs identified and included in questioning

Teacher identifies pupils with special educational needs, both high ability and those with learning disabilities, to ensure they fully participate in teacher-pupil interactions

## Demonstrating skills in feedback

24. Teacher acknowledge pupil answers	Teacher indicates that their reply to question was appropriate with, for example, a 'yes', 'no', 'ok' response
25. The teacher probes pupil answers	Teacher stays with the same pupil and asks for further elaboration or explanation as to how they arrived at the answer
26. The teacher comments on pupil answers	Teacher exemplifies, expands, justifies or provides additional information on a pupil answer
27. Teacher builds pupil answer into subsequent questions	Teacher asks a follow-up question which builds on pupil answer
28. The teacher encourages pupils to ask	Teacher encourages pupils to ask questions directed to ask questions both the teacher and other members of the class
29. The teacher provides equal amounts of feedback to both girl and boy pupils	Teacher provides the same amount and quality of feedback to girl and boy pupils
30. Teacher moves around to interact with pupils to provide spoken and/or written feedback	Teacher provides spoken comments on pupil work individually or in groups to inform learning  Written feedback gets beyond the simple marking of work to provide detailed feedback

### **Demonstrating skills in class management and control**

31. Teacher relates well to pupils	Teacher has good rapport with pupils  Teacher demonstrates enthusiasm, commitment and warmth
32. Teacher manages the class effectively	Teacher has clear ground rules for classroom behaviour  Teacher stops potential discipline problem from escalating  Teacher reinforces good behaviour with praise
33. Teacher effectively manages timing of lesson	Teacher sets clear, and restricted, goals  Teacher effectively manages transitions between lesson activities  High pupil levels of time on task

## **Annex 6: Interview and focus group questions**

### **Education officials (i.e. district supervisors, inspectors, technical assistance personnel) school directors/coordinators, deputy directors and teacher interviews**

General questions we will address in relation to the UNICEF CFS interventions are:

- How have the CFS interventions improved teacher classroom practice?
- How have the CFS interventions improved learner effectiveness?
- How effective are the CFS interventions for raising the attainment of the most disadvantaged pupils?
- What are the challenges in implementing the different elements of the CFS training?
- How consistently are the CFS strategies implemented?
- What additional support is needed to make the CFS interventions work well?
- How can the long-term impact of the CFS interventions be sustained?

Specific questions to be covered in the school directors and teacher interviews will include:

- details of the school context and context for teaching
- age, experience, roles and qualifications of teachers
- previous experience of INSET (if any) compared to the UNICEF CFS teacher training
- views on teaching and learning approaches in UNICEF CFS interventions
- effects of training on their teaching practices
- level and quality of external support received from education officials

Questions for those schools and teachers who received the CFS subject specific training (science, literacy and mathematics) will include:

- views on effectiveness of the UNICEF CFS subject training
- variations (if any) in the effectiveness of the subject training
- any challenges in terms of transferring the subject training to the classroom
- views on the impact of the training: (a) on the teachers themselves; (b) on the pupils; (c) on other teachers or the school more widely
- views on the appropriateness of the subject training across different groups of pupils (e.g. girls/boys, year groups, disadvantaged pupils, children with additional learning needs)
- applicability of the UNICEF CFS training for other schools in Timor-Leste

## Annex 7: List of data collectors

No	Naran	Email	Position	Department / Faculty
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	Agostinho da Conceição Anuno, M.Ed. L'Ship.Mgmt.	<i>tinhonuno@yahoo.com</i>	UNTL General Council	English/Education Arts and Humanities
	Nuno da Silva Gomes, M.Ed.	<i>gomes_nunos@yahoo.com</i>	Vice Director	Tetum/Education Arts and Humanities
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## **Annex 8: Data collectors' training programme**

The training workshop ran over the course of 5 working days as follows:

- Monday 31<sup>st</sup> August – Tuesday 1<sup>st</sup> September: training workshop
- Wednesday 2<sup>nd</sup> September : piloting in schools
- Thursday 3<sup>rd</sup> September: review of instruments/inter-rater reliability check
- Friday 4<sup>th</sup> September: Logistics and preparation for field work

The workshop sessions will be timetabled as follows:

- 9.00 – 10.30 am: session 1
- 10.30 – 11.00 am: mid-morning break
- 11.00 – 12.30 pm: session 2
- 12.30 – 1.30 pm: lunch
- 1.30 – 3.00 pm: session 3
- 3.00 – 3.30 pm: afternoon break
- 3.30 – 5.00 pm: session 4

## Annex 9: Rapid assessment findings

UNICEF colleagues provided the research team with Rapid Assessment data which had been acquired in the course of staff visits to CFS schools. This data consisted of both quantitative and qualitative information. The quantitative data consisted of a spreadsheet for each of five schools from one region (Oecusse), visited in June 2015. The spreadsheets provide answers to a number of questions about physical aspects (or the 'hardware') of the school, including information about buildings, WASH facilities and sports equipment available. Questions asked, for example:

- whether the school had a school improvement plan ('yes' for three of the schools, 'no' for two)
- whether school managers checked lesson plans and made comments on a weekly basis ('yes' in all five schools)
- whether there was a classroom learning corner ('yes' for three of the schools, 'no' for two)
- whether there was 'use of interactive teaching methodology' ('yes' for four of the schools, 'no' in one)
- whether the school had access to water ('yes' for four of the schools, 'no' in one)
- whether the school had an existing library ('yes' for two of the schools, 'no' in three)
- whether the school had textbooks available (all five answered 'yes', but the numbers of textbooks were not specified)

The qualitative data consisted of proformas completed during the course of interviews with three PTA representatives and a teacher (two interviews in Oecusse and two in Ermera). None of the findings in these interviews were contrary to the main findings of our evaluation. The teacher said that the school did implement the CFS principles and they were positive about the CFS approach. The PTA representatives, for example, stated that their role was to resolve issues between the school and the community. One PTA representative said two areas for improvement were: a need for more teaching and learning materials (books), and more training on the Eskola Foun approach.

## Annex 10 – Quantitative data analysis

This section reports on the quantitative findings emerging from the observation data. The observation data investigated the extent to which the provision of CFS training has helped strengthen the capacities of teachers by improving their pedagogical practices in the classroom.

### Frequency of teaching and learning behaviours

The frequency sample consisted of 105 lesson observations. Frequencies of data were obtained according to type of school, grade (or age cohort) and subject. Table 2 below provides an overview of the number of observations and the types of school from where they were collected.

**Table 2: Type of school**

Location of school	Frequency	%
Urban <sup>23</sup>	35	33.3
Rural	70	66.7
Total	105	100.0

For the number of pupils in a class the mean was 33.22 and the mode was 42. There were six outliers: one lesson had 141 pupils and five classes had less than 10 pupils. Table 3 gives a breakdown of the frequency of grades observed and Table 3 shows a breakdown of subjects. Originally we aimed to collect data on Grade 3 and 6 classes and 69 of the 105 observations covered these two grades. However, in some schools, particularly rural schools, the classes were multi-grade with children of different ages.

**Table 3: Class observations by grade**

Grade (s)	Frequency	%
½	2	1.9
1/2/3	1	1.0
2	7	6.7
3	34	32.4
¾	1	1.0
4	9	8.6
4/5	1	1.0
5	9	8.6
5/6	2	1.9
6	35	33.3
7	4	3.8
Total	105	100.0

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<sup>23</sup> For our working definition of urban and rural, all district capitals were considered as urban areas and areas with a population 2000 or more inhabitants with less than 50% of the population employed in agriculture or fishing and with access to electricity, piped water, schools and medical care were also considered as urban.

**Table 4: Class observations by subject**

Subject	Frequency	%
Maths	38	36,2
Literacy	39	37,1
Science	28	26,7
Total	105	100,0

**Child Friendly School training**

Observed teachers were asked about their level of CFS training: whether they had received general CFS training, subject specific training (i.e. in literacy, mathematics and science) and/or training in the use of instructional materials. Tables 5, 6 and 7 show the frequency and percentage of teachers trained in each of these categories.

**Table 5: CFS general training**

	Frequency	Percent
No	31	29.5
Yes	74	70.5
Total	105	100.0

**Table 6: CFS subject specific training**

	Frequency	Percent
No	34	32.4
Yes	71	67.6
Total	105	100.0

**Table 7: CFS training in teaching materials**

	Frequency	Percent
No	32	30.5
Yes	73	69.5
Total	105	100.0

**Frequencies for learning and teaching behaviours**

Ratings for the 33 behaviours were clustered into dichotomous data. Table 8 shows the percentage of observed lessons where the behaviour was 'rarely' or 'never' observed.

**Table 8: Frequency of teaching and learning behaviours**

Teaching behaviour	Percentage: Occasionally/consistently	Percentage: Never/rarely
1. Teacher clearly states lesson objectives and activities	72.4	27.6
2. Teacher checks for prior knowledge	60.0	40.0
3. Teacher explains material accurately and clearly	78.1	21.9
4. Teacher code switches during course of lesson (i.e. from Portuguese to Tetum)	76.2	23.8
5. Teacher emphasises key points of the lesson	75.2	24.8
6. Teacher uses a range of instructional materials	34.3	65.7
7. Teacher makes effective use of chalk board	72.4	27.6
8. Teacher exhibits personal enthusiasm	76.2	23.8
9. Teacher displays a positive tone by using encouragement rather than criticism	72.4	27.6
10. Teacher knows and uses pupil names	72.4	42.9
11. Teacher encourages equal participation of girl and boy pupils	67.6	32.4
12. Teacher uses paired or group work to encourage active participation of pupils	52.4	47.6
13. Teacher uses peer tutoring where a more knowledgeable pupil tutors another pupil	5.7	94.3
14. Teacher arranges classroom layout to facilitate learning of all pupils	59.0	41.0
15. Teacher moves around classroom to interact with individual pupils	61.9	38.1
16. Teacher uses session to summarise, consolidate and extend learning	32.4	67.6
17. Teacher uses cued elicitation for the drilling of facts, ideas and routines through repetition	59.0	41.0
18. Teacher asks closed questions requiring pupils to recall or repeat information	72.4	27.6
19. Teacher asks open-ended questions	56.2	43.8
20. Teacher calls on pupils to answer questions individually	58.1	41.9
21. Teacher provides equal opportunities for both girl and boy pupils to answer questions	65.7	34.3
22. Teacher asks pupils to demonstrate in front of class	43.8	56.2
23. Pupils with special educational needs identified and included in teacher questioning <sup>24</sup>	40.0	60.0
24. Teacher evaluates pupil answers	66.7	33.3
25. Teacher probes pupil answers	61.0	39.0
26. Teacher comments on pupil answers	54.3	45.7
27. Teacher builds pupil answers into subsequent questions	19.0	81.0
28. Teacher encourages pupils to ask questions	21.9	78.1
29. Teacher provides equal amounts of feedback to both girl and boy pupils	34.3	65.7
30. Teacher moves around to interact with pupils to provide spoken and or written feedback to inform learning	58.1	41.9
31. Teacher relates well to learners	77.1	22.9
32. Teacher effectively manages the class	74.3	25.7
33. Teacher effectively manages lesson time	68.6	31.4

From Table 8 it can be observed that some effective teaching behaviours promoted as being child friendly were generally under-utilised by teachers. Peer tutoring (13) never or rarely occurred in over 90% of lessons and just over 80% of teachers never or rarely used uptake questions (27) to build pupil answers into their subsequent questions. Similarly, nearly 80% of teachers never or rarely encouraged pupils to ask questions (28) and nearly 70% never or rarely used plenaries (16) to summarise, consolidate and extend pupil learning during and at the end of a lesson.

<sup>24</sup> Note 29 cases were missing

Just over 65% never or rarely used a range of instructional materials (6) or provided equal amounts of feedback to both girls and boys when answering a question (29). Fifty-six% of teachers never or rarely used pupils to demonstrate (22) in front of the class. Nearly half of the observed teachers rarely or never used paired or group work (12) and 46 percent rarely or never commented on a pupil answer in their feedback. Similarly 44% of teachers rarely or never asked an open question.

It also seems 60% of teachers did not identify or include pupils with special educational needs (23) in their questioning; however, this figure could be ambiguous as 29 observers did not complete this category on the observation schedule, suggesting either pupils with additional learning needs were not present in the classroom or they had not been identified by the teacher.

### Comparison of behaviours by grade

Grades were clustered into two groups. Grades 1 to 4 were grouped under younger pupils. Grades 5 to 7 were grouped under older pupils. The frequency of 'rarely' or 'never' observed behaviours was compared between the younger and older pupils. Results from a Chi square test for independence<sup>25</sup> used to determine whether age made a difference showed no variation between the teacher behaviours used across grades.

**Table 9: Differences in frequency of teaching and learning behaviours across grades**

Teaching behaviour	Younger		Older		Pearson's Chi2	p-value <sup>26</sup>
	Frequency	Percent	Frequency	Percent		
1. Teacher clearly states objectives	15	51.7	14	48.3	0.001	1
2. Teacher checks for prior knowledge	23	54.8	19	45.2	0.31	0.689
3. Teacher explains material accurately and clearly	12	52.2	11	47.8	0.007	1
4. Code Switches	14	56	11	44	0.275	0.652
5. Teacher emphasises key points of the lesson	15	57.7	11	42.3	0.543	0.504
6. Teacher uses a range of instructional materials	34	49.3	35	50.7	0.374	0.681
7. Teacher makes effective use of chalk board	12	41.4	17	58.6	1.62	0.275
8. Teacher exhibits personal enthusiasm	12	48	13	52	0.203	0.819
9. Teacher displays a positive tone	13	44.8	16	55.2	0.699	0.513
10. Teacher knows pupil names	21	46.7	24	53.3	0.715	0.435

<sup>25</sup> The chi-square test for independence is used to determine whether two categorical variables are related. It compares the frequency of cases found the various categories of one variable across the different categories of another variable. For example, do the teaching behaviours vary according to the age of the pupils?

<sup>26</sup> A p-value shows that some other factor other than chance is accountable for any differences found in the data. The p-value is a number between 0 and 1 and interpreted in the following way: a small p-value (typically  $\leq 0.05$ ) indicates strong evidence; a large p-value ( $> 0.05$ ) indicates weak evidence. For example, a p value of 0.01 means that there is only a 1% chance that this variation is due to chance alone. Therefore, other factors must be involved.

11. Teacher encourages equal participation of girl and boy pupil	16	47.1	18	52.9	0.384	0.677
12. Teacher uses paired/group work	23	46	27	54	1.353	0.326
13. Teacher uses peer tutoring	53	53.5	46	46.5	3.078	0.106
14. Teacher arranges classroom layout to facilitate learning of all pupils	25	58.1	18	41.9	1.135	0.323
15. Teacher moves around classroom to interact with individual pupils	20	50	20	50	0.053	0.843
16. Teacher summarises throughout lesson	34	47.9	37	52.1	1.101	0.307
17. Teacher uses cued elicitation and chorus response	18	41.9	25	58.1	2.669	0.116
18. Teacher asks closed questions	14	48.3	15	51.7	0.159	0.828
19. Teacher asks open-ended questions	25	54.3	21	45.7	0.279	0.695
20. Teacher calls on pupils to answer questions individually	19	43.2	25	56.8	2.334	0.165
21. Teacher provides equal opportunities for both girls and boys to answer questions	16	44.4	20	55.6	1.07	0.313
22. Teacher asks pupils to demonstrate in front of class	28	47.5	31	52.5	1.089	0.327
23. Pupils with special educational needs identified and included in teacher questioning	31	49.2	32	50.8	0.499	0.552
24. Teacher evaluates pupil answers	13	37.1	22	62.9	4.289	0.062
25. Teacher probes pupil answers	18	43.9	23	56.1	1.525	0.236
26. Teacher comments on pupil answers	20	41.7	28	58.3	3.082	0.115
27. Teachers builds answer into subsequent question	40	47.1	45	52.9	3.411	0.083
28. Teacher encourages pupils to ask questions	41	50	41	50	0.306	0.642
29. Teacher provides equal amounts of feedback to girls and boys	35	50.7	34	49.3	0.04	1
30. Teacher moves around to interact with pupils	20	45.5	24	54.5	1.082	0.328
31. Teacher relates well to learners	11	45.8	13	54.2	0.39	0.643
32. Teacher effectively manages the class	12	44.4	15	55.6	0.71	0.504
33. Teacher effectively manages lesson time	14	42.4	19	57.9	1.562	0.293

## Comparison of teaching behaviours by subject

Frequencies of observed teaching behaviours were also compared across subjects: literacy, mathematics and science using a Kruskal-Wallis test<sup>27</sup> (Table 10). Results from the test show that six teaching and learning behaviours are different across the three subjects: emphasis of key points of the lesson (5), use of a range of instructional materials (6), effective use of chalkboard (7), teacher displaying a positive note (9), summarising throughout the lesson (16), and probing pupil answers (25).

**Table 10: Comparison of teaching behaviours by subject**

Teaching behaviour	Kruskal Wallis	p-value
1. Teacher clearly states objectives	0.138	0.933
2. Teacher checks for prior knowledge	1.486	0.476
3. Teacher explains material accurately and clearly	0.586	0.746
4. Code Switches	0.158	0.924
5. Teacher emphasises key points of the lesson	8.914	<b>0.012</b>
6. Teacher uses a range of instructional materials	5.737	<b>0.057</b>
7. Teacher makes effective use of chalk board	16.99	<b>&lt;0.000</b>
8. Teacher exhibits personal enthusiasm	4.348	0.114
9. Teacher displays a positive tone	6.457	<b>0.04</b>
10. Teacher knows pupil names	3.172	0.205
11. Teacher encourages equal participation of girl and boy pupil	1.463	0.481
12. Teacher uses paired/group work	0.466	0.792
13. Teacher uses peer tutoring	2.565	0.277
14. Teacher arranges classroom layout to facilitate learning of all pupils	5.613	0.06
15. Teacher moves around classroom to interact with individual pupils	0.668	0.716
16. Teacher summarises throughout lesson	9.195	<b>0.01</b>
17. Teacher uses cued elicitation and chorus response	4.181	0.124
18. Teacher asks closed questions	0.121	0.941
19. Teacher asks open-ended questions	0.33	0.848
20. Teacher calls on pupils to answer questions individually	5.272	0.072
21. Teacher provides equal opportunities for both girl and boy pupils to answer questions	0.828	0.661
22. Teacher asks pupils to demonstrate in front of class	1.36	0.507
23. Pupils with special educational needs identified and included in teacher questioning	0.763	0.683
24. Teacher evaluates pupil answers	3.717	0.156
25. Teacher probes pupil answers	6.384	<b>0.041</b>
26. Teacher comments on pupil answers	2.054	0.358
27. Teachers builds...	0.886	0.642
28. Teacher encourages pupils to ask questions	1.326	0.515
29. Teacher provides equal amounts of feedback to girls and boys	4.554	0.103
30. Teacher moves around to interact with pupils	3.244	0.197
31. Teacher relates well to learners	2.47	0.291
32. Teacher effectively manages the class	4.045	0.132
33. Teacher effectively manages lesson time	4.994	0.082

Further comparisons with the Mann Whitney U test<sup>28</sup> were conducted to find the difference across the groups (Table 11). Three further comparisons were carried out:

- Maths vs literacy
- Literacy vs science

<sup>27</sup> The Kruskal-Wallis test allows for an analysis of variance for three or more groups. In other words, it allows for a 'between-groups' analysis, for example between literacy, maths and science classes

<sup>28</sup> The Mann-Whitney U test is used to for differences between two independent groups on a continuous measure. In the case of the current study, it evaluates whether the pairs of subjects significantly differ in the range of the teaching behaviours used by teachers

- Maths vs science

To control for multiple comparisons, a critical level of significance of 0.016 was expected ( $0.05/3=0.016$ ). The following table shows the comparisons with a significant difference.

**Table 11: Statistical differences across subjects**

	Teaching behaviours					
	5	6	7	9	16	25
Maths vs literacy	0.006		0.002		0.003	
Literacy vs science		0.017				
Maths vs science			<.001	0.015		0.012

These results show us that when compared across classes:

- Teacher never or rarely emphasises key points in literacy lessons (5)
- Teacher never or rarely uses a range of instructional materials in science lessons (6)
- Teacher never or rarely makes effective use of chalkboard in literacy and science lessons (7)
- Teacher never or rarely displays a positive tone in science lessons (9)
- Teacher never or rarely summarises content throughout literacy lessons (16)
- Teacher never or rarely probes pupil answers in science lessons (25).

### Comparison of behaviours between CFS/non-CFS trained teachers

Frequencies of behaviour 'never' or 'rarely' observed were calculated for CFS and Non-CFS lessons using Pearson chi-squared test as shown in Table 12.

**Table 12: Frequency of behaviours in CFS/non-CFS lessons 'never' or 'rarely' observed**

Behaviour	CFS		Non-CFS		Pearson's Chi2	p-value
	Frequency	Percent	Frequency	Percent		
1. Teacher clearly states lesson objectives and activities	14	48.3	15	51.7	0.626	0.51
2. Teacher checks for prior knowledge	24	57.1	18	42.9	0.093	0.841
3. Teacher explains material accurately and clearly	11	47.8	12	52.2	0.495	0.49
4. Teacher code switches during course of lesson	13	52.0	12	48.0	0.069	0.822
5. Teacher emphasises key points of the lesson	16	61.5	10	38.5	0.732	0.497
6. Teacher uses a range of instructional materials	40	58.0	29	42.0	1.101	0.31
7. Teacher makes effective use of chalk board	16	55.2	13	44.8	0.013	1.00
8. Teacher exhibits personal enthusiasm	15	60.0	10	40.0	0.358	0.647
9. Teacher displays a positive tone	18	62.1	11	37.9	0.978	0.384
10. Teacher knows and uses pupil names	24	53.3	21	46.7	0.029	1.00
11. Teacher encourages equal participation of girls and boys	20	58.8	14	41.2	0.417	0.538
12. Teacher uses paired or group work	32	64.0	18	36.0	3.285	0.079
13. Teacher uses peer tutoring	56	56.6	43	43.4	3.629	0.091
14. Teacher arranges classroom layout to facilitate learning	28	65.1	15	34.9	3.747	0.072

15. Teacher moves around classroom to interact with individual pupils	25	62.5	15	37.5	1.757	0.228
16. Teacher uses session to summarise, consolidate and extend learning	40	56.3	31	43.7	0.372	0.676
17. Teacher uses cued elicitation	25	58.1	18	41.9	0.436	0.554
18. Teacher asks closed questions	17	58.6	12	41.4	0.303	0.664
19. Teacher asks open-ended questions	29	63.0	17	37.0	2.53	0.12
20. Teacher calls on pupils to answer questions individually	25	56.8	19	43.2	0.271	0.692
21. Teacher provides equal opportunities for both girl and boy pupils	21	58.3	15	41.7	0.362	0.68
22. Teacher asks pupils to demonstrate in front of class	32	54.2	27	45.8	0.008	1.00
23. Pupils with special educational needs identified and included in teacher questioning <sup>29</sup>	34	54.0	29	46.0	4.116	0.066
24. Teacher evaluates pupil answers	19	54.3	16	45.7	<.001	1.00
25. Teacher probes pupil answers	23	56.1	18	43.9	0.089	0.842
26. Teacher comments on pupil answers	29	60.4	19	39.6	1.132	0.327
27. Teacher builds pupil answers into subsequent questions	46	54.1	39	45.9	0.005	1.00
28. Teacher encourages pupils to ask questions	40	48.8	42	51.2	4.572	<b>0.036</b>
29. Teacher provides equal amounts of feedback to both girl and boy pupils	43	62.3	26	37.7	5.233	<b>0.025</b>
30. Teacher moves around to interact with pupils	28	63.6	16	36.4	2.668	0.116
31. Teacher relates well to learners	15	62.5	9	37.5	0.846	0.485
32. Teacher effectively manages the class	18	66.7	9	33.3	2.245	0.179
33. Teacher effectively manages lesson time	<b>23</b>	<b>69.7</b>	<b>10</b>	<b>30.3</b>	<b>4.606</b>	<b>0.037</b>

There was a statistical significant difference between the groups in the way the teacher encourages pupils to ask questions (28), the amount of feedback provided to girls and boys (29), and the way the teacher effectively manages lesson time (33). Teachers in non-CFS groups are less likely to incorporate these behaviours into their lessons.

### Cross-tabulations analysis of CFS/non-CFS trained teachers

Using cross-tabulations, we looked further at the percentages of teachers in each of the school groups (CFS and Non-CFS) for whom the teaching behaviours were 'consistently' observed, as illustrated in the example in Table 13 below.

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<sup>29</sup> Note 29 cases were missing

**Table 13 – Proportions of CFS and Non-CFS teachers who ‘never’ or ‘rarely’ state lesson objectives (Statement 1) (percentages)**

	Statement 1 – Teacher clearly states objectives				Total
	Never observed	Rarely observed	Occasionally observed	Consistently observed	
<b>CFS Schools</b>	8 (26%)	4 (13%)	10 (32%)	9 (29%)	31 (100%)
<b>Non-CFS Schools</b>	1 (1%)	16 (23%)	28 (40%)	25 (36%)	70 (100%)

This form of cross tabulation was calculated for each of the 33 behaviour items. It can be seen in this example that the proportions of teachers who ‘consistently’ carried out this action (clearly stating lesson objectives) was 36% based on observations in CFS schools, compared with only 29% of teacher observations in non-CFS schools. So it can be said that a greater proportion of CFS trained teachers stated lesson objectives clearly.

We cannot say, however, that this behaviour pattern was ‘caused’ by CFS training as there can be many factors that shape teacher behaviour, but if we examine the findings across all 33 items of behaviour a remarkably strong association between incidences of positive teacher behaviours and CFS training is found. There were only five items from the 33 where the proportion of non-CFS teachers displaying a positive behaviour ‘consistently’ was higher than that for CFS-trained teachers (there were two items where the behaviour was displayed in equal measure by CFS/non-CFS teachers, and 26 where the proportion of CFS teachers using the behaviour ‘consistently’ was higher than the proportion of non-CFS teachers - see Table 14 below).

**Table 14 – Proportions of CFS and non-CFS teachers who ‘consistently’ demonstrated specified positive behaviours during classroom observations (percentages)**

Teaching behaviour	CFS Teachers (%)	non-CFS Teachers (%)	Percentage difference
20. Calls on pupils to answer questions individually	52	10	42
8. Exhibits personal enthusiasm	49	13	36
7. Makes effective use of chalk board	61	29	32
9. Displays a positive tone	47	19	28
4. Code switches	59	32	27
10. Knows pupil names	46	19	27
15. Moves around classroom to interact with pupils	42	16	26
33. Effectively manages lesson time	36	10	26
30. Moves around to interact with pupils	41	16	25
22. Asks pupils to demonstrate in front of class	38	19	19
11. Encourages equal participation of girl & boy pupils	49	32	17
24. Evaluates pupil answers	39	23	16
31. Relates well to learners	54	39	15
21. Provides equal opportunities for girl & boy pupils	47	32	15
32. Effectively manages the class	43	29	14
28. Encourages pupils to ask questions	14	3	11
23. Pupils with SEN identified and included in questioning	11	0	11
5. Emphasises key points of the lesson	36	26	10
29. Provides equal amounts of feedback to girls & boys	23	13	10
1. Clearly states objectives	36	29	7
19. Asks open-ended questions	23	16	7
3. Explains material accurately and clearly	35	29	6
14. Arranges classroom layout to facilitate learning	32	26	6
25. Probes pupil answers	32	29	3
26. Comments on pupil answers	28	27	1
6. Uses a range of instructional materials	11	10	1
13. Uses peer tutoring	3	3	0
27. Builds pupil answers into subsequent questions	3	3	0
2. Checks for prior knowledge	24	26	-2
17. [never] uses cued elicitation and chorus response	9	13	-4

16. Summarises throughout lesson	18	23	-5
12. Uses paired/group work	23	29	-6
18. [never] asks closed questions	11	19	-8

The behaviours where there were the largest positive differences between the CFS and the non-CFS teacher observations are towards the top of the list of behaviours. It can be seen, for example, that considerably larger proportions of CFS, than non-CFS teachers, were likely to:

- call on pupils to answer questions individually
- exhibit personal enthusiasm
- make effective use of the chalkboard
- display a positive tone
- switch language codes
- know individual pupil names
- move around the classroom to interact with pupils
- effectively manage lesson time
- move around to interact with pupils

These activities are encouraged as part of a child-friendly approach, so these figures provide substantial evidence that these particular aspects of the CFS intervention are having an impact on teacher behaviours.

There is no basis for complacency, however: moving down the table we find some activities where the differences in the proportions of CFS and Non-CFS teachers using specified positive behaviours are small. For example:

- comments on pupil answers
- uses a range of instructional materials
- uses peer tutoring
- builds pupil answers into subsequent questions
- checks for prior knowledge

It may be that future CFS training could be enhanced by putting greater emphasis on these specified activities. It may also be of concern that only 23% of CFS teachers consistently used paired/group work; only three% of these teachers consistently used peer tutoring, and only 11% consistently used a range of instructional materials.

### Timeline Analysis

Working independently, two observers were asked to complete the timeline analysis schedule giving a total of 210 observations. The schedule required the observers to record the main teaching activities from a list of prompts *every five minute interval* in the lesson. Observers could record more than one activity in each of the five minute sections of the lesson.

In order to analyse the data a count of the number of times an activity occurred within a five-minute interval was carried out and divided by the total number of activities in the interval to arrive at a percentage of the time spent on the activity. Officially, lessons are meant to last 45 minutes so the timeline schedules were completed within these time frames. If the lesson ended before the official designated time, observers coded the behaviour as 'off-task' and if the lesson ran over 45 minutes the observer stopped coding the lesson. Table 14 shows a breakdown of the most common teaching and learning activities as a percentage of the lesson time in which they were observed for each of the five minute intervals across all observed lessons.

**Table 15: Percentage of time spent on teaching and learning activities across all lessons**

All lessons										
Minutes	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	Overall %
<b>1. Explanation/ Question/Answer</b>	16.5	15.2	14.6	14.2	13.6	12.4	12.1	11.1	11.9	13.5
<b>2. Rote/recitation</b>	8.5	9.0	8.2	6.7	7.7	5.5	7.4	6.6	5.6	7.3
<b>3. Chalkboard</b>	13.4	12.2	10.7	10.7	9.7	9.4	9.1	8.8	9.1	10.3
<b>4. Pupils working from chalkboard</b>	5.1	6.0	6.9	7.3	8.1	8.5	7.9	9.0	7.6	7.4
<b>5. Teacher reading</b>	7.3	8.2	5.5	4.5	5.0	5.3	3.8	3.7	4.1	5.3
<b>6. Pupil reading</b>	2.7	4.3	4.3	3.8	3.9	3.9	4.2	2.7	2.3	3.6
<b>7. Pupils working from textbook</b>	5.3	6.2	5.5	6.7	5.7	7.2	5.1	5.8	6.6	6.0
<b>8. Paired/group work</b>	4.5	5.5	6.2	6.5	6.4	5.7	7.9	6.8	6.2	6.2
<b>9. Pupil demonstrating</b>	1.8	1.6	3.0	3.3	3.5	4.6	4.0	4.9	5.1	3.5
<b>10. Teacher reviews topic</b>	4.7	3.9	5.0	4.9	6.4	4.9	5.3	5.5	6.2	5.2
<b>11. Teacher marking</b>	3.4	5.3	7.1	6.9	7.3	7.8	8.5	9.2	9.1	7.2
<b>12. Class management</b>	14.5	12.9	12.3	13.2	11.9	12.7	12.3	13.6	13.0	13.0
<b>13. Class admin.</b>	6.7	4.3	3.9	3.8	4.2	4.2	4.2	3.9	4.3	4.4
<b>14. Interruption</b>	2.2	0.9	1.4	1.1	0.4	0.7	0.9	0.8	1.0	1.0
<b>15. Pupils off-task</b>	3.3	4.4	5.3	6.4	6.2	7.2	7.5	7.6	7.8	6.2

The timeline data was broken down into teacher-fronted and pupil activities (Table 16).

**Table 16: Percentage of time spent on teacher-fronted and pupil-based activities across all lessons**

Teaching & learning activity	Percentage of lesson time
Teacher-fronted activity	
<b>A1 = Teacher explanation, question &amp; answer</b>	13.5
<b>A2 = Teacher rote/chorus responses</b>	7.3
<b>A3 = Teachers writing on chalkboard</b>	10.3
<b>A5 = Teacher reading to whole class</b>	5.3
<b>A10 = Teacher reviews lesson topic</b>	5.2
<b>A.11 = Teacher marking work</b>	7.2
<b>A12 = Class Management</b>	13.0
<b>A13 = Class administration</b>	4.4
Pupil activity	
<b>A4 = pupil working from chalkboard</b>	7.4
<b>A6 = Pupil reading to whole class</b>	3.6
<b>A7 = Pupil working from textbook</b>	6.0
<b>A8 = Pupils working in pair/group</b>	6.2

<b>A9 = Pupil demonstrating to class</b>	3.5
Non-curricular	
<b>A14 = Interruption</b>	1.0
<b>A15 = Off-task</b>	6.2

It can be seen that teacher-fronted activities made up two thirds of the lesson time (66%) and non-curricular activities 7%. The three most dominant teacher activities are teacher-led explanation, recitation and rote, class management and use of the chalkboard accounting for a third of the lesson time. Pupil activities made up 27% of the lesson time with individual seat work (individually working from the chalkboard and textbook) taking up just over 13% of the time. Paired work or group work made up just 6% of the time, pupils being asked to demonstrate in front of the class 3.5% and pupils being asked to read to the class 3.6%.

## District level

Having looked at the overall findings emerging from the timeline analysis we investigated variations in the data at the district level. Table 17 shows a breakdown down of the overall percentage of time spent on teaching-fronted and pupil-based activities in each of the 5 districts.

**Table 17: Percentage of time spent on teacher-fronted and pupil-based activities across districts**

Teaching & learning activity	Percentage of lesson time				
Teacher-fronted activity	Aileu	Ermera	Manatuto	Oecusse	Viqueque
<b>A1 = Teacher explanation, question &amp; answer</b>	14.7	12.4	10.6	13.9	18.7
<b>A2 = Teacher rote/chorus responses</b>	4.3	10.7	7.8	5.7	6.9
<b>A3 = Teachers writing on chalkboard</b>	9.2	9.8	10.0	14.3	9.6
<b>A5 = Teacher reading to whole class</b>	2.4	4.8	8.3	5.0	3.8
<b>A10 = Teacher reviews lesson topic</b>	2.0	6.5	9.5	3.9	1.6
<b>A.11 = Teacher marking work</b>	2.6	4.9	11.1	11.1	5.8
<b>A12 = Class Management</b>	12.9	15.8	6.6	15.0	17.7
<b>A13 = Class administration</b>	8.9	8.1	1.1	0.6	1.7
Pupil activity					
<b>A4 = Pupil working from chalkboard</b>	5.1	9.4	6.2	5.0	12.2
<b>A6 = Pupil reading to whole class</b>	1.8	1.8	5.3	4.9	4.3
<b>A7 = Pupil working from textbook</b>	10.2	2.3	6.3	7.0	4.2
<b>A8 = Pupils working in pair/group</b>	12.4	3.4	6.5	2.3	5.2
<b>A9 = Pupil demonstrating to class</b>	5.1	3.5	3.0	2.9	2.7
Non-curricular					
<b>A14 = Interruption</b>	0.9	1.4	0.5	1.6	0.9
<b>A15 = Off-task</b>	7.6	5.2	7.2	5.5	4.7

Again, we see that teacher-fronted activities take up the majority of the time in all 5 districts with teacher-led explanation, recitation and rote, use of the chalkboard and class management being the dominant activities. In the case of Ermera, Manatuto, Oecusse and Viqueque teacher-fronted activity takes up 73%, 65%, 69.5% and 65.8% of the time respectively. However, in the case of Aileu, teacher-led activities take up 57% of the lesson time and pupil activities 35%; of this time spent on pupil activities, 12.4% is taken up with group work and 5.1% with pupil demonstration, the highest across all 5 districts.

## Main and filial schools

Next we investigated the percentage distribution of lesson activities across main training and filial schools as shown in Table 18 and a similar pattern of time distribution emerged as in the overall and district level findings.

**Table 18: Percentage of time spent on teacher-fronted and pupil-based activities in main and filial schools**

Teaching and learning activity	Percentage of lesson time	
	Main Schools	Filial Schools
Teacher-fronted activity		
<b>A1 = Teacher explanation, question &amp; answer</b>	13.8	13.4
<b>A2 = Teacher rote/chorus responses</b>	6.7	7.4
<b>A3 = Teachers writing on chalkboard</b>	9.4	10.6
<b>A5 = Teacher reading to whole class</b>	5.8	5.1
<b>A10 = Teacher reviews lesson topic</b>	4.5	5.4
<b>A.11 = Teacher marking work</b>	7.3	7.1
<b>A12 = Class Management</b>	13.2	12.9
<b>A13 = Class administration</b>	3.3	4.7
Pupil activity		
<b>A4 = Pupil working from chalkboard</b>	6.0	7.8
<b>A6 = Pupil reading to whole class</b>	5.1	3.1
<b>A7 = Pupil working from textbook</b>	7.2	5.7
<b>A8 = Pupils working in pair/group</b>	4.4	6.8
<b>A9 = Pupil demonstrating to class</b>	4.3	3.3
Non-curricular		
<b>A14 = Interruption</b>	1.5	0.9
<b>A15 = Off-task</b>	7.6	5.8

As with the overall and district level findings, teacher-fronted activities take up the majority of the lesson time in the main schools and filial schools accounting for 64% and 66% of the time respectively. Pupil activities made up 27% of the time in both the main and filial schools with individual seat work (individually working from the chalkboard and textbook) taking up just over 13% of the time in both types of school. Paired or group work made up 4.4% of the time in the main schools and 6.8% of the time in filial schools. Pupil demonstration made up 4.3% of the time in main schools and 3.3% in filial schools; pupils being asked to read to the class made up 5.1% and 3.1% of the time respectively.

Our analysis of the percentage of time spent on teaching and learning activities in mathematics, science and literacy lessons also revealed a similar pattern of time spent on lesson activities as shown in Table 19.

**Table 19: Percentage of time spent on teacher-fronted and pupil-based activities in mathematics, science and literacy lessons**

Teaching and learning activity	Percentage of lesson time		
	Mathematics	Science	Literacy
Teacher-fronted activity			
<b>A1 = Teacher explanation, question &amp; answer</b>	12.2	17.5	12.3
<b>A2 = Teacher rote/chorus responses</b>	7.7	8.3	6.1
<b>A3 = Teachers writing on chalkboard</b>	11.8	8.4	10.0
<b>A5 = Teacher reading to whole class</b>	3.4	6.7	6.4
<b>A10 = Teacher reviews lesson topic</b>	5.9	5.4	4.2
<b>A.11 = Teacher marking work</b>	8.0	5.5	7.4
<b>A12 = Class Management</b>	13.3	13.0	12.5
<b>A13 = Class administration</b>	4.2	5.5	3.8
Pupil activity			
<b>A4 = Pupil working from chalkboard</b>	9.0	5.4	6.9
<b>A6 = Pupil reading to whole class</b>	2.0	3.5	5.4
<b>A7 = Pupil working from textbook</b>	4.8	6.9	6.9
<b>A8 = Pupils working in pair/group</b>	6.3	4.9	7.0
<b>A9 = Pupil demonstrating to class</b>	3.9	2.6	3.7
Non-curricular			
<b>A14 = Interruption</b>	0.8	1.3	1.2
<b>A15 = Off-task</b>	6.8	5.1	6.2

As with the overall findings and findings from the districts and main and filial schools, teacher-fronted activities made up around two-thirds of the lesson time in mathematics (66.5%), science (70%) and literacy (63%). Non-curricular activities made up 7.6%, 6.4% and 7.4% of the time in mathematics, science and literacy respectively. Pupil activities made up 26%, 23% and 30% of the time in mathematics, science and literacy, with individual seat work taking up 14%, 12% and 14% of the time respectively. Paired or group work was the highest in literacy (7%) and pupil demonstration was marginally higher in mathematics (3.9%). Overall, the timeline analysis suggested there was little variation in the distribution of teaching activities across the three subjects.

## Grade level

A similar finding emerged when we analysed distribution of time on teaching and learning activities according to grades (Table 20). As discussed earlier, although we achieved a good number of observations of Grades 3 and 6 (69 of the 105 observations), in some schools 36 of the observations were with multi-grade classes. To analyse the timeline data according to grade we combined Grades 1-4 (younger group) and Grades 5-7 (older group) as they were of equal size.

**Table 20: Percentage of time spent on teacher-fronted and pupil-based activities across grades**

Teaching and learning activity	Percentage of lesson time	
	Grades 1 – 4	Grades 5 - 7
Teacher-fronted activity		
<b>A1 = Teacher explanation, question &amp; answer</b>	12.4	14.7
<b>A2 = Teacher rote/chorus responses</b>	8.1	6.3
<b>A3 = Teachers writing on chalkboard</b>	9.9	10.8
<b>A5 = Teacher reading to whole class</b>	5.6	4.9
<b>A10 = Teacher reviews lesson topic</b>	6.4	3.9
<b>A.11 = Teacher marking work</b>	7.6	6.8
<b>A12 = Class Management</b>	11.8	14.2
<b>A13 = Class administration</b>	4.4	4.4
Pupil activity		
<b>A4 = Pupil working from chalkboard</b>	7.1	7.7
<b>A6 = Pupil reading to whole class</b>	4.1	3.0
<b>A7 = Pupil working from textbook</b>	5.2	6.9
<b>A8 = Pupils working in pair/group</b>	6.6	5.8

<b>A9 = Pupil demonstrating to class</b>	3.5	3.5
Non-curricular		
<b>A14 = Interruption</b>	1.2	0.8
<b>A15 = Off-task</b>	6.1	6.3

The percentage of time spent on teacher-fronted and pupil activities was very similar across grades 1 – 4 and 4/5-7: 66% of the time was spent on teacher directed activities and 27% of the time was spent on pupil activities. The breakdown of pupil activities was also very similar: individual seat work took up 12.3% of the time at grades 1 – 4 and 14.6% at grades 5-7; group work took up 6.6% and 5.8% of the time respectively and pupil demonstration took up 3.5% of the time across the combined grades.

Overall, the findings of the timeline analysis across district, main and filial school, subject and grade suggest teacher-fronted talk, use of the chalkboard and class management were the most common teaching and learning activities. There also appeared to be little variation in the underlying pedagogy across district, subject, grade or type of school in the cluster.

### CFS and non-CFS trained teachers

The timeline data were analysed according to whether or not the teachers had received the Child Friendly School training. Table 21 shows the percentages of time spent on each teaching and learning activity in the CFS trained teachers' lessons.

**Table 21: Percentage of time spent on teacher-fronted and pupil-based activities by CFS trained teachers**

CFS trained teachers	Minutes									
	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	Over all
Teaching and learning activities										
<b>1.Explanation/Question/Answer</b>	14.7	13.2	13.4	12.5	12.7	11.7	10.1	10.7	11.4	12.3
<b>2. Rote/recitation</b>	9.3	10.8	9.6	8.2	8.5	6.4	8.7	6.5	5.3	8.1
<b>3. Chalkboard</b>	11.8	11.5	9.6	10.0	9.5	8.5	9.4	9.6	9.3	9.9
<b>4. Pupils working from chalkboard</b>	4.7	5.6	6.5	6.4	6.7	8.5	8.7	9.2	7.7	7.1
<b>5. Teacher reading</b>	7.2	6.6	6.2	5.4	5.6	7.1	3.6	4.6	4.5	5.6
<b>6. Pupil reading</b>	2.5	4.2	4.8	4.6	4.9	5.3	4.7	3.1	2.4	4.1
<b>7. Pupils working from textbook</b>	5.0	4.9	4.5	5.7	4.6	6.0	4.3	5.7	5.7	5.2
<b>8. Paired/group Work</b>	5.0	5.6	6.5	6.4	7.0	6.7	9.0	6.9	6.5	6.6
<b>9. Pupil demonstrating</b>	2.2	2.1	3.8	3.2	3.2	3.5	4.0	4.6	4.9	3.5
<b>10. Teacher reviews topic</b>	5.7	5.9	6.5	5.7	7.7	5.7	6.1	6.9	7.7	6.5
<b>11. Teacher marking</b>	3.9	5.9	6.5	6.8	8.1	8.5	8.7	10.0	9.8	7.6
<b>12. Class management</b>	12.9	11.8	11.3	12.9	10.2	11.3	11.2	11.9	12.6	11.8
<b>13. Class admin.</b>	6.8	4.5	3.4	4.3	4.2	3.9	4.3	4.2	4.1	4.4
<b>14. Interruption</b>	3.2	1.4	1.0	1.4	0.7	0.7	1.1	0.8	0.8	1.2
<b>15. Pupils off-task</b>	5.0	5.9	6.2	6.4	6.3	6.4	6.1	5.4	7.3	6.1

Table 22 shows the percentage of time spent on each teaching and learning activity in the non-CFS trained teachers' lessons (n=52).

**Table 22: Percentage of time spent on teaching and learning activities by Non-CFS trained teachers**

Non-CFS trained teachers	Minutes									
	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	Over all
Teaching and learning activities										
1. Explanation/ Question/Answer	18.4	17.3	15.9	15.9	14.6	13.1	14.2	11.5	12.3	14.8
2. Rote/recitation	7.7	7.2	6.6	5.2	6.9	4.6	5.9	6.7	6.0	6.3
3. Chalkboard	15.1	13.0	11.8	11.4	10.0	10.2	8.7	7.9	9.0	10.8
4. Pupils working from chalkboard	5.5	6.5	7.4	8.1	9.6	8.5	7.1	8.7	7.5	7.7
5. Teacher reading	7.4	9.7	4.8	3.7	4.2	3.5	4.0	2.8	3.7	4.9
6. Pupil reading	2.9	4.3	3.7	3.0	2.7	2.5	3.6	2.4	2.2	3.0
7. Pupils working from textbook	5.5	7.6	6.6	7.7	6.9	8.5	5.9	6.0	7.5	6.9
8. Paired/group work	4.0	5.4	5.9	6.6	5.7	4.6	6.7	6.7	6.0	5.8
9. Pupil demonstrating	1.5	1.1	2.2	3.3	3.8	5.7	4.0	5.2	5.2	3.5
10. Teacher reviews topic	3.7	1.8	3.3	4.1	5.0	4.2	4.3	4.0	4.9	3.9
11. Teacher marking	2.9	4.7	7.7	7.0	6.5	7.1	8.3	8.3	8.6	6.8
12. Class management	16.2	14.1	13.3	13.7	13.8	14.1	13.4	15.5	13.4	14.2
13. Class admin.	6.6	4.0	4.4	3.3	4.2	4.6	4.0	3.6	4.5	4.3
14. Interruption	1.1	0.4	1.8	0.7	0.0	0.7	0.8	0.8	1.1	0.8
15. Pupils off-task	5.1	5.9	6.2	6.4	6.3	6.4	6.1	5.4	7.5	6.3

The timeline data for CFS and non-CFS-trained teachers were further broken down into teacher-fronted activities and pupil activities as shown in Table 23.

**Table 23: Percentage of time spent on teacher-fronted and pupil-based activities by CFS and non-CFS trained teachers**

Teaching and learning activity	Percentage of lesson time	
	CFS trained teachers	Non-CFS trained teachers
Teacher-fronted activity		
A1 = Teacher explanation, question & answer	12.3	14.8
A2 = Teacher rote/chorus responses	6.1	6.3
A3 = Teachers writing on chalkboard	9.9	10.8
A5 = Teacher reading to whole class	6.6	4.9
A10 = Teacher reviews lesson topic	7.5	3.9
A.11 = Teacher marking work	7.6	6.8
A12 = Class Management	11.8	14.5
A13 = Class administration	4.4	4.3
Pupil activity		
A4 = Pupil working from chalkboard	7.1	7.7
A6 = Pupil reading to whole class	4.1	3.0
A7 = Pupil working from textbook	5.2	6.9
A8 = Pupils working in pair/group	6.6	5.5
A9 = Pupil demonstrating to class	3.5	3.5
Non-curricular		
A14 = Interruption	1.2	0.8
A15 = Off-task	6.1	6.3

In terms of time spent on teacher directed and pupil activities the percentage distributions were very similar: both CFS trained and non-trained teachers spent 66% of the time on teacher-fronted activities and 26% of the time on pupil activities. However, CFS trained teachers spent less time on teacher-led explanation, question and answer and rote, writing on the chalkboard and class management and more time reading to the whole class and reviewing lesson topic. CFS trained teachers also spent less time on individual seat work and more time on paired or group work.

Overall, the frequency and timeline analysis suggests that while much of the teaching and learning found in Timor-Leste primary schools follows a traditional transmission model made up of teacher directed activities (i.e. explaining, question and answer, teacher rote and

chorus response, writing on the chalk board, reading to the class, lesson review, teacher marking, class management, administration), CFS trained teachers are starting to use a wider repertoire of teaching and learning approaches. These include dialogue and discussion alongside explanation, instruction rote and recitation in whole class and paired/group-based activities. In this way, pupils are given more opportunity to express their thoughts and engage with others in joint intellectual activity so as to advance their individual capacity for productive, rational and reflective thinking.

## Appendix 11: Evaluation timeline

Task	Timeframe
Field visit ( 21 days in country)	28 <sup>th</sup> August – 11 <sup>th</sup> September (21 days)
Data entry and cleaning ( 21 days in distance)	28 <sup>th</sup> September – 30 October (25 days)
Draft the evaluation report ( 15 days in distance)	2 <sup>nd</sup> November – 18 <sup>th</sup> November (15 days)
Stakeholder and UNICEF review and feedback ( 10 days) – 5 days Timor-Leste, 5 days Regional office	19 <sup>th</sup> November – 2 <sup>nd</sup> December ( 10 days)
Incorporate feedback and resubmission of the draft report (10 days)	3 <sup>rd</sup> December – 8 <sup>th</sup> December (6 days)
Cross-check of in-cooperated feedback by UNICEF / further refinement of evaluation report by University York team ( 4-5 days)	9 <sup>th</sup> - 10 <sup>th</sup> December (2 days)
Presentation of the draft findings at validation workshop, finalize the evaluation report	11 <sup>th</sup> December
Submit the final evaluation report	15 <sup>th</sup> December

## Appendix 12: Field Pictures

### CFS Evaluation Photos in Aileu Municipality



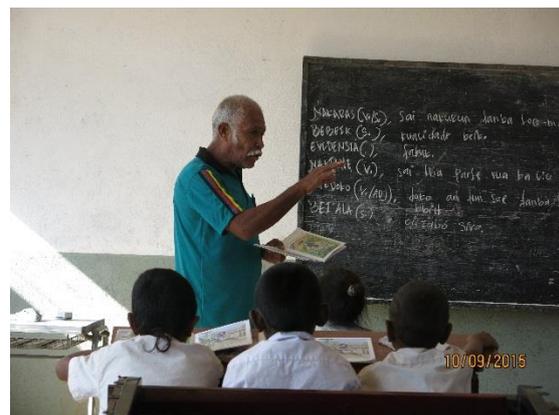
Three grade 2 Halalmeta EBF students are counting in front of the classroom using wooden sticks to complete the mathematic exercise on the blackboard (UNICEF/2015/VLopes)



One of four grade 3 Halalmeta EBF students is explaining to other students on the group work on mathematic counting in front of classroom using wooden sticks (UNICEF/2015/VLopes)



The average Portuguese teacher reviewed when those 3 Halalmeta grade 5 students are reading the Portuguese textbook (UNICEF/2015/VLopes)



The average Portuguese teacher is explaining to those Bocolelo grade 4 students on the content of the story telling "Monkey and Mouse" (UNICEF/2015/VLopes)



One of the UNTL CFS Evaluator is interviewing the Madabeno EBF teacher (UNICEF/2015/VLopes)



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