





UZBEKISTAN EDUCATION for EXCELLENCE PROGRAM









Uzbekistan Education for Excellence Program

ICT and EFL Teacher Guide Uptake Study Phase II Report Cooperative Agreement No. 72011519CA00004

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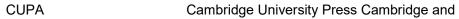


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LIST OF ACRONYMS



Assessment

EFL English as a Foreign Language

ICT information and communication technology

IRR Inter-rater reliability

MoPE Ministry of Public Education

Q&A question and answer STB student textbook

TG Teacher's Guide

TGUS Teacher's Guide Uptake Study

TPD teacher professional development

USAID United States Agency for International Development



BACKGROUND

The Government of Uzbekistan Ministry of Public Education (MoPE) is committed to an ambitious program of systematic and comprehensive reforms. The country aims to create an education system that can produce graduates with critical thinking, problem solving, and practical skills that will enable them to succeed. To support the MoPE in achieving its reform agenda, the United States Agency for International Development (USAID) initiated the 4-year Uzbekistan Education for Excellence Program (the Program) on December 9, 2019, which will end on December 8, 2023. This Program aims to provide the expertise and experience needed to help the MoPE to achieve and sustain three overarching results:

- 1. Improved Uzbek Language Arts and Mathematics outcomes in grades 1–4
- Enhanced information and communication technology (ICT) instruction in grades 1–11
- 3. Improved English as a Foreign Language (EFL) instruction in grades 1-11.

To reach these goals, the Program has committed to developing, piloting, and adjusting foundational teaching and learning materials in line with MoPE's standards-based system reform. To ensure subject alignment, the Program implemented a process of developing standards that set the minimal learning outcomes followed by grade scope and sequences that guide content to be covered by teachers to reach the standards. The Program then developed student textbooks (STBs) and teacher's guides (TGs) that support the learning and teaching process.

For EFL, with the support of Florida State University and Cambridge University Press and Assessment (CUPA), two existing international book series, GuessWhat! for grades 1–6 and Prepare for grades 7–11 were assessed and selected by MoPE for EFL instruction. Both series include a STB, a workbook, and a TG for each grade. The Program adapted and customized these books to the local Uzbekistan context. Part of the adaptation included inserting an addendum in the TG to guide teachers in using the scripted lessons within the allocated lesson time in the Uzbek system, and number of lessons in a year. To support teachers in using the new materials, the Program also provided EFL teachers with professional development and community building sessions and piloted the materials from September 2021 to end of May 2022. MoPE is currently conducting a national rollout of the EFL materials.

To improve ICT instruction, the Program, with MoPE's Republican Education Center guidance and with technical assistance from Mississippi State University, first developed national standards and derived a scope and sequence for Uzbekistan's ICT curriculum for grades 1–11. At the request of MoPE, the Program later restructured ICT standards and scopes for grades 5–11. MoPE then requested support for the procurement of an international ICT series, which resulted in the assessment and selection of an ICT student book series, also from CUPA, for the targeted grades 5-11. The STBs were procured after the development of the standards and scope and sequence. While they were translated into Uzbek and adapted to the local context, the CUPA ICT STB series did not fully align with the new ICT student learning standards for the country. To support the use of these foundational materials, the Program's subject matter experts developed a TG to accompany the CUPA

ICT STBs. To reconcile the misalignment between the STB and the national standards, the customization of TGs included guidance on how to use the STBs to teach to the national standards and within the number of prescribed teaching hours per Uzbekistan's education policy. The ICT TGs thus do not follow the traditional format of a sequence of individual lesson plans for each lesson in the school year but rather is arranged in four main sections (see Annex A for a full description) that still require teachers to develop plans for their lessons.

The Program designed and implemented teacher professional development (TPD) for ICT teachers, consisting of 16 sessions Professional development was designed to support teachers' use of the TGs and STBs. From September 2021 to May 2022, the Program piloted the new materials in 213 classrooms in the Sirdaryo and Namangan regions of Uzbekistan. Because of resource limitations, MoPE has not yet rolled out the ICT materials for the 2022/2023 school year, although this is planned.

PURPOSE

This study is Phase II of a two-part Teacher's Guide Uptake Study (TGUS) for ICT and EFL. Phase I was conducted in December 2021 and field tested the above-referenced ICT TGs and the addendum to the EFL TGs to determine, within a short period of time, what changes and adaptations in terms of content, instructional strategies, and design needed to be made before revising the books and submitting them to MoPE for nationwide printing and rollout at the end of Year 3 of the Program (beginning of 2022/2023 school year). TGUS Part I also served to test TGUS data collection tools, built team capacity to use Tangerine®, RTI's open-source data collection platform, and determine the current level of use of student-centered instructional strategies by ICT and EFL teachers.

The purpose of Phase II of this study, conducted in May 2022, was to continue to track teachers' use of the new TGs and their application of selected student-centered teaching strategies in the classroom. Findings from Phase II also informed the overall design of the ULA and Mathematics TPD approach employed to support teachers during the pilot of the ULA and Mathematics TGS and STBs in the 2022/2023 school year.

For comparative purposes and to show levels of uptake over time, this report combines select Phase I findings with Phase II findings.

RESEARCH DESIGN AND QUESTIONS

The TGUS Phase II was a mixed-methods study that drew on quantitative and qualitative data and sought to answer the following questions:

- Are the language, design, and structure of the ICT and EFL TGs appropriate for teacher ease of use within the local context?
- To what extent are teachers using the new TGs in the classroom?
- To what degree are ICT and EFL teachers applying select student-centered strategies in the classroom?

CONCEPTUAL FRAMEWORK

In Phase I of this study, RTI's essential guidance and best practices for developing teacher guides¹ served as the guiding conceptual framework to evaluate the quality of the ICT TGs,

¹ Piper, B., Sitabkhan, Y., Mejía, J., and Betts, K. (2018). *Effectiveness of teachers' guides in the Global South: scripting, learning outcomes, and classroom utilization*. RTI Press Publication No. OP-0053-1805. RTI Press. https://doi.org/10.3768/rtipress.2018.op.0053.1805

teachers' use thereof, and, most importantly, provided a way to collect teacher feedback and corrections to the books prior to the deadline for MoPE to get the revised books printed for the new school year. Phase II of this study streamlined and utilized the same conceptual framework as Phase I of the TGUS. The accompanying best practice criteria focused on selected evidence-based, high-impact, student-centered teaching strategies² that can be addressed through TPD and tracked over time. For ICT, the selected student-centered teaching strategies are part of the project-based approached that underpin the TG instructional design. For EFL, the targeted student-centered teaching strategies are those that are at the core of the communicative approach to teaching foreign languages (Table 1, Annex B).

Table 1. Selected best practice student-centered teaching strategies and criteria

Best Practice Criteria	Descriptions		
ICT and EFL			
Set goals	The teacher states the objective for the lesson and/or activity at the beginning. The teacher explains how the activity will help students meet the lesson objective.		
Collaborative learning	Students work in pairs or in small groups. Students in the group actively participate.		
Questioning	In relevant activities and where appropriate, teacher asks open-ended questions about opinions and/or topics that have more than one right answer (for probing and reflecting).		
Monitor learning	Teacher uses questioning to monitor learning and check for comprehension. Provides student(s) feedback that informs student performance relative to learning objective(s). Feedback is specific and actionable.		
ICT			
Lesson planning	The teacher develops and applies multi-objective and multitopic lesson units that span several lessons.		
EFL			
Developing four skills approach	Teacher uses activities developing: writing speaking reading listening		

https://www.education.vic.gov.au/school/teachers/teachingresources/practice/improve/Pages/hits.asp

² Department of Education and Training, Victoria State Government. (2022). *High impact teaching strategies: excellence in teaching and learning*.



DATA COLLECTION METHODS

To answer the aforementioned research questions, the Program administered two surveys to teachers in the pilot schools between February and April 2022 and conducted classroom observations in nine selected schools in May 2022. Whereas the first survey provided the necessary data parameters for the entire targeted teacher population, the second survey allowed for the triangulation of results between classroom observations and cross comparisons between teachers' self-perceptions and their observed behaviors. The Program used data from both surveys to draw a purposeful sample for classroom observations (see below).

For both surveys and the classroom observations, researchers used RTI's Tangerine data collection tool in the form of either an offline data collection app or as an online survey (see Tool Development below).

During all data collection activities, the Program strictly followed RTI's established research ethics and principles. All respondents were informed beforehand on the usage of the data collected and were asked if they were willing to participate in the study.

Survey 1

The first survey was conducted in February–March 2022 as part of the Program's school-level data collection activity, where the Program's trained enumerators collected data directly from teachers during short face-to-face interviews. In cases where teachers were absent on the day of data collection, enumerators obtained the required information from the school administration. The first survey collected data on the grades taught by teachers, their qualifications, years of experience, whether they received the TGs, if they are using the TGs, and, if so, how they are using them and how often.

Survey 2

The second survey was conducted in April 2022 and delved deeper into how teachers are using the TGs in terms of the best practice criteria used to track student-centered learning. Data collected during this survey provided insights into teachers' self-perceptions regarding the extent to which they believe they are applying student-centered strategies during their lessons and how much they rely on the TGs for lesson planning. Both of these aspects were also later observed during the classroom observations for cross-comparison purposes.

Classroom Observations

Classroom observations took place in May 2022 and comprised three sections: preobservation, lesson observation, and follow-up interview. The pre-observation section
included questions designed to obtain meta information about the lesson to be observed
such as class size, ratio of boys to girls, teachers' preparation for the lesson (if they used
TGs for lesson planning), the grade, etc. The lesson observation section comprised
questions about the selected best practice criteria for student-centered teaching practices.
The follow-up interviews included questions about teachers' rationale for lesson
modifications and extra resources used. This provided the necessary data to uncover
teachers' perceptions of their use of the TGs through cross-referencing with the survey data.

TOOL DEVELOPMENT

RTI's Tangerine data collection app served as the principal tool for all data collection activities.

Researchers incorporated the first survey into the general school-level data collection tool, which was field tested in December 2021. Based on the results of the field testing and follow-up discussions with education administrators, all anticipated response options were coded and included in the tool for efficient data collection.

The second survey was a streamlined and simplified version of the tool and questions used in Phase I of the TGUS and was designed to provide cross-comparison results with the planned classroom observations. Data from the first survey were also used to prepopulate teacher lists so that data collected could be directly linked to the first survey.

For the classroom observation, researchers also refined, adapted, and simplified the questionnaire and observation tools used in Phase I. The tool allowed data collectors to log real-time observations of lessons regardless of network connection. Robust skip logics, real-time data validation logics, and alert/warning notifications were installed into the classroom observation tool to enhance reliable and efficient data entry. Researchers enhanced the Phase II observation tool by including answer options that are more specific to Uzbek classroom realities and excluded the questions and sections that were found ambiguous and unnecessary after the Phase I. The observation tool also included follow-up open-ended questions (Annex C).

ENUMERATOR TRAINING

For the first survey, the Program conducted a two-day training workshop for enumerators to familiarize themselves with the data collection tool and to ensure that enumerators could collect data in accordance with the prescribed instructions and guidelines. Researchers explained the Teacher's Guide Uptake Study (TGUS) Phase II–related-section of the data collection process to the enumerators and allocated practice time. Enumerators also received written instructions in the form of a field manual for the activity.

The Program also conducted a two-day training classroom observation workshop. Observers/enumerators first learned about the observation tool and its features. Following this overview, all enumerators reviewed each question in the tool and discussed possible responses based on the possible classroom scenarios that could arise. Enumerators agreed on one standard approach for recording data. At the end of each training day enumerators completed inter-rater reliability (IRR) tests using prepared videos featuring ordinary ICT and EFL lessons from schools in the targeted regions. The Program shared first-day test results with enumerators at the beginning of the second day of training. Program researchers emphasized questions and sections where enumerators diverged. On the last IRR test enumerators showed a significant enough convergence on the way they recorded data, and thus all seven enumerators were deemed to have "passed" and were able to proceed with classroom observations.

SAMPLING

During the first survey, the Program collected the necessary meta data on all teachers in the targeted schools. Researchers used data from the first survey to track survey submissions during the second survey collection process. A total of 693 ICT and EFL teachers responded to the second survey from the Namangan and Sirdaryo regions. Figure 1 presents the distribution of the number of respondents for the second survey by region and by subject.

Figure 1: Distribution of number of respondents, Survey II 600 400 300 348 162 100 130 53 ICT **EFL** ■ Sirdaryo ■ Namangan

For the observations, researchers drew a purposeful sample of 20 teachers (10 EFL and 10 ICT; Table 2) based on the data from the two surveys. The selection criteria for the sample were based on the following factors:

- School location within target regions and their districts
- Teachers from all districts
- Teachers' self-reported use of TGs for lesson planning for all their lessons in the last week
- Equal proportion of teachers who reported using TGs for all their lessons and teachers who reported using them for few or none of their lessons
- The speed at which teachers responded to the survey once it was sent out to all teachers (as a proxy for teacher general engagement and behavior)

Table 2. List of sampled teachers for classroom observation

Teacher observed	Subject	Region	District	In the last week, whether used TG for lesson planning	Behavior and engagement proxy (when responded to survey)	Years of teaching experience
Teacher 1	ICT	Namangan region	Namangan district	No	Mid-submission	4
Teacher 2	ICT	Namangan region	Namangan district	No	Mid-submission	1
Teacher 3	ICT	Namangan region	Norin district	Yes - all lessons	Mid-submission	5
Teacher 4	ICT	Namangan region	Norin district	Yes - all lessons	Mid-submission	30
Teacher 5	ICT	Namangan region	Uychi district	Yes - all lessons	Mid-submission	8
Teacher 6	ICT	Namangan region	Uychi district	Yes - few lessons	Mid-submission	12

Table 2. List of sampled teachers for classroom observation

Teacher observed	Subject	Region	District	In the last week, whether used TG for lesson planning	Behavior and engagement proxy (when responded to survey)	Years of teaching experience
Teacher 7	ICT	Sirdaryo region	Guliston district	No	Late submission	15
Teacher 8	ICT	Sirdaryo region	Guliston district	Yes - all lessons	Early submission	15
Teacher 9	ICT	Sirdaryo region	Mirzaobod district	Yes - some lessons	Late submission	6
Teacher 10	ICT	Sirdaryo region	Oqoltin district	Yes - all lessons	Early submission	19
Teacher 11	EFL	Namangan region	Namangan district	Yes - all lessons	Mid-submission	17
Teacher 12	EFL	Namangan region	Namangan district	Yes - some lessons	Late submission	29
Teacher 13	EFL	Namangan region	Norin district	Yes - few lessons	Mid-submission	1
Teacher 14	EFL	Namangan region	Norin district	Yes - some lessons	Early submission	2
Teacher 15	EFL	Namangan region	Uychi district	No	Mid-submission	5
Teacher 16	EFL	Namangan region	Uychi district	Yes - all lessons	Mid-submission	11
Teacher 17	EFL	Namangan region	Uychi district	Yes - all lessons	Mid-submission	8
Teacher 18	EFL	Sirdaryo region	Guliston district	No	Mid-submission	15
Teacher 19	EFL	Sirdaryo region	Mirzaobod district	Yes - all lessons	Mid-submission	2
Teacher 20	EFL	Sirdaryo region	Oqoltin district	Yes - few lessons	Mid-submission	8

The average size of classes observed was 15 students for both EFL and ICT because both subjects are usually taught by splitting one class into two groups. Girls-to-boys ratios in observed lessons were 1.8 for EFL and 1.2 for ICT lessons.

DATA ANALYSIS

The Program cross-tabulated all findings from the observations with the data collected from the two surveys. Researchers focused on the discrepancies and similarities between teachers' self-perceptions as expressed in the surveys and their observed classroom performance. Researchers compared classroom performance of teachers who reported using TGs for all lessons with the performance of teachers who used TGs less frequently or not at all. Where applicable, researchers looked at differences in results between EFL and ICT teachers. Researchers also analyzed data on whether teachers were applying selected student-centered strategies in terms of lesson time allocation for these strategies. Qualitative

data analysis of follow-up questions to teachers used a thematic analysis approach where researchers coded answers and then developed categories and themes.³

LIMITATIONS

Although the Program distributed the online survey to all teachers in the pilot schools, only about half of the total teacher population in targeted districts and subjects completed the survey. This resulted in the omission of a group of teachers who did not or were not willing to respond to the online survey. To mitigate this limitation, the Program also sampled a group of teachers who reported not using the new TGs at all for their lesson planning and teachers who only responded to the second survey after the targeted follow-up on survey participation.

³ Lester, J. N., Cho, Y., & Lochmiller, C.Y. (2020). Learning to do qualitative data analysis: a starting point. *Human Resource Development Review*, Vol. 19(1) 94–106.

EFL AND ICT TEACHER GUIDE UPTAKE FINDINGS

The findings of EFL and ICT TG uptake after eight months of introduction in the classroom are described below.

USE OF TG AND LESSON PLANNING

There was an overall improvement in the use of TGs over time; however, ICT teachers continued to struggle. Between Phase I and Phase II, there was an 8% increase (from 52% to 60%) in the number of EFL teachers who reported relying only on the TG for their lesson planning. The proportion of ICT teachers who reported using the TG as a supporting resource for their lesson planning also increased by 61% (from 19% to 80%; Figure 2). The number of ICT teachers who did not use the TG and the number of teachers who relied exclusively on the TG decreased. Because the ICT TGs were designed to support teachers in writing their own lesson plans, the Program considers the teachers' shift from relying only on the TGs to using the TGs as supports for their own lesson planning as following the right trajectory. For EFL, there was a slight increase of the proportion of teachers who did not use the TG (from 7% to 10%) accompanied by a larger increase in teachers who were only using the TG for lesson planning (from 52% to 60%).

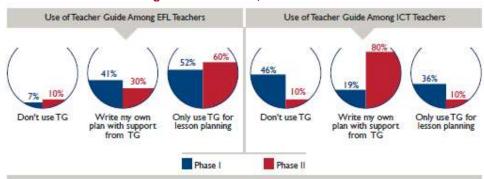


Figure 1: Use of TG, Phases I and II

Most ICT teachers (68%) indicated that it is difficult for them to plan and manage lessons with multiple goals, objectives, and standards in accordance with the new TGs. Only half as many EFL teachers (37%) gave the same answer. Regarding teachers' self-efficacy to use the new TGs, EFL teachers were more likely to state that they felt very confident about using the TGs compared to their ICT counterparts (75% vs. 33%; Figure 3). These findings imply that most ICT teachers do not have a strong conviction that they can effectively utilize the new TGs in their lessons.

Figure 2: Lesson planning and self-efficacy, Phase II

LESSON OBJECTIVES

More teachers were setting and communicating lesson objectives. In 73% of EFL and 70% of ICT lessons observed during Phase I, teachers stated a learning objective at the beginning of the lesson. This proportion increased to 100% for both subjects by Phase II. These findings suggest that many teachers now appreciate the importance of setting and communicating learning objectives during the teaching and learning process. However, only approximately half (60% of ICT teachers and 50% of EFL teachers) connected the lesson topic or objective to the real-world context.

NUMBER OF ACTIVITIES

Teachers increased the number of activities per lesson. From Phase I to Phase II, the average number of activities per EFL and ICT lesson increased by 3.1 (from 4.6 to 7.7) and 3.7 (from 1.3 to 5), respectively, suggesting that teachers are following the TGs more and are moving toward more student engagement in class (Figure 4).

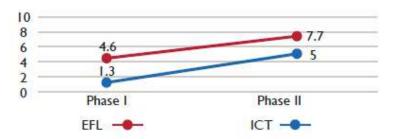
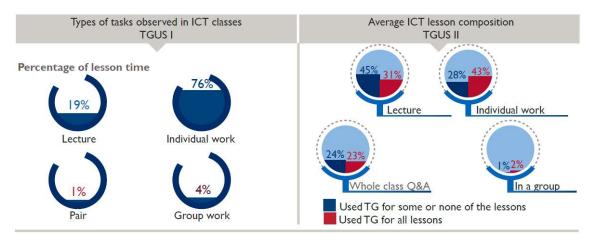


Figure 3: Average number of activities per lesson, Phases I and II

COLLABORATIVE LEARNING

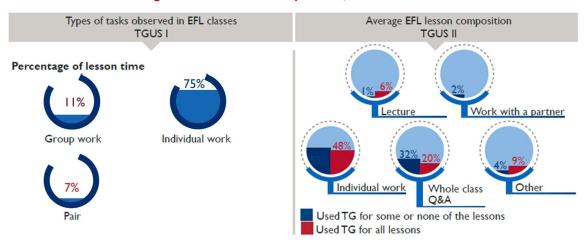
ICT lessons were still composed of lectures and individual work with insufficient collaborative learning, such as pair or group work. However, teachers who reported using the TGs for every lesson tended to engage students more through independent work and less through lecture (Figure 5), following the desired trajectory.

Figure 5: ICT lesson composition, Phases I and II

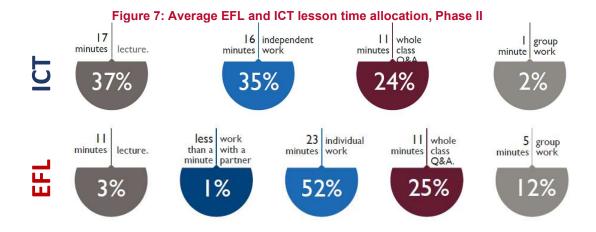


EFL lessons were also still mostly composed of individual work. However—and unlike ICT teachers—EFL teachers who reported using the TGs for every lesson tended to engage students more through group work activities (Figure 6) compared to EFL teachers not using the TGs for all lessons.

Figure 6: EFL lesson composition, Phases I and II

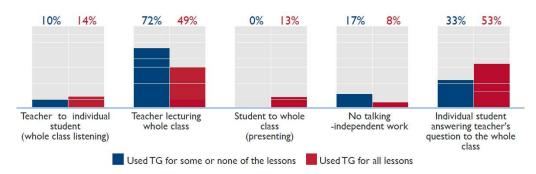


Whole class question and answer (Q&A) approaches are still dominant, with ICT and EFL allocating 24% and 25% of lesson time to this approach, respectively. ICT teachers allocated only 2% of class time to group work whereas EFL teachers allocated 12%. Given that group and pair work are predominant strategies in both TGs, this is still very low (Figure 7).



The balance between teacher and student talk time during ICT lessons improved somewhat. There was some improvement between Phase I and Phase II observations in terms of the ratio of teacher-to-student talking during ICT lesson time. In Phase I, teachers talked on average for 78% of the lesson duration. By Phase II, this proportion decreased to 49% among teachers who regularly use the TGs and 72% among teachers who reported using TGs sometimes or not at all (Figure 8).

Figure 8: Percentage of ICT teacher talking time vs. student talking time



The balance of teacher-student talking during EFL lessons also improved. During Phase I, teachers talked on average for 78% of the lesson duration while students mainly talked for the remainder of the lesson (22%). However, in Phase II the proportion of the lesson during which teachers were the dominant speakers decreased to 16% among teachers who use the TGs regularly and 5% among those who use the TGs sometimes or not at all (Figure 9).

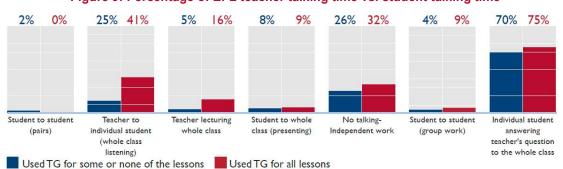


Figure 9: Percentage of EFL teacher talking time vs. student talking time

QUESTIONING

A low level of lesson time was spent on open-ended questioning. TGUS Phase II observations showed that 80% of EFL and 40% of ICT teachers asked open-ended questions that led to discussion during at least one activity. However, the lesson time allocation data reveal that, on average, no more than 20% of EFL and ICT lesson time was spent asking and discussing open-ended questions. These findings imply that although most teachers do ask open-ended questions during lessons, they do so for a very short period of time.

ICT teachers who reported using TGs for all of their lessons in the last week tended to engage students more with open-ended questions throughout the lesson. By contrast, ICT teachers who reported using TGs partially or not at all in the last week organized activities in which asking questions was not applicable. The frequency of TG use in the last week among EFL teachers on the other hand did not play a substantial role in the type of questions teachers asked (Figure 10).

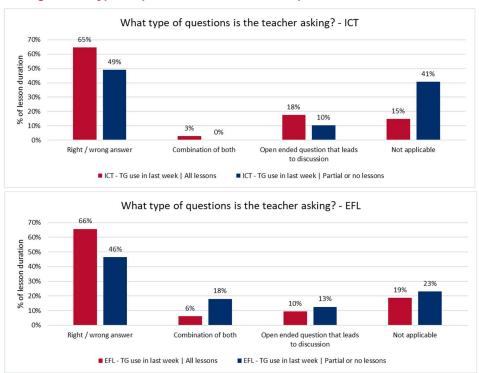


Figure 10: Type of questions teachers asked, percent of lesson duration

MONITORING LEARNING FREQUENCY

Teachers checked for understanding. EFL and ICT teachers checked for student understanding more than once, but in the same way during 66% and 73% of the activities observed, respectively, in TGUS Phase II. This implies that though teachers are checking for understanding there is little variation in how they do it namely, for example, teachers just state weather answers are right or wrong. (Figure 11).

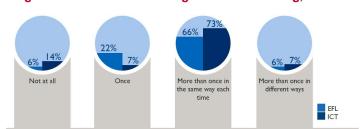
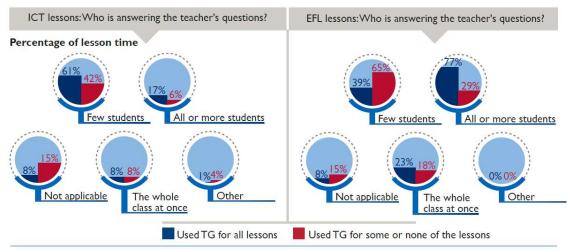


Figure 11: Teachers checking for understanding, Phase II

QUESTIONING AND MONITORING LEARNING

Teachers who used TGs asked questions to more students. TGUS Phase II findings show that ICT teachers tended to ask questions to few students during their lessons, regardless of whether they reported using the TGs for all lessons or not. In contrast, the EFL teachers who used the TGs for all their lessons tended to include all or most students in Q&A activities during the majority of their lesson time (77%; Figure 12).

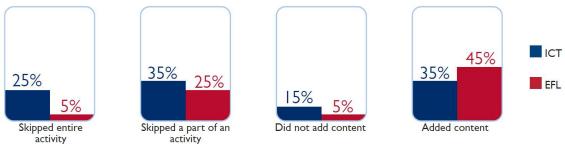
Figure 12: Who is answering teacher questions, Phase II?



CONTENT MODIFICATION AND OMISSION

There was creative content modification and content omission was because of contextual factors (Figure 13). Substantial proportions of ICT and EFL teachers—35% and 45%, respectively—added content, such as warm-up exercises for EFL and additional resources for ICT Qualitative findings show that teachers of both subjects demonstrated creativity in their approach to modifying content. Skipping an entire activity was very common among ICT teachers but less so among EFL teachers.

Figure 13: Teacher content modification or skipping, Phase II



The reasons why teachers skipped part of or entire activities are listed in Table 3 and explain in part why teachers had to modify or skip activities or parts of activities. Specifically, both EFL and ICT teachers were faced with issues of IT, infrastructure, and lack of understanding. Two ICT teachers indicated not having enough time to complete the activities.

Table 3. Reasons for Modifications or Skipping				
Subject Reason				
EFL Setting not amenable to pair work				
Unsure/not clear on how to do activity				
No device available to watch video; problems with laptop				

ICT	Not enough time to complete activity
	Unsure/not clear on how to do activity
No device available, no internet	



This section provides an overview of the main conclusions and recommendations for teacher uptake of ICT and EFL materials drawn from the above findings.

SUMMARY CONCLUSIONS

- The proportion of EFL teachers who used only the TGs for their lesson planning increased by 8%.
 - In contrast, the proportion of ICT teachers who used the TGs for lesson planning increased by 61%, but they reported experiencing difficulty in developing projectbased lesson plans and felt less confident in their use of the TG.
- Teachers increased the number of activities per lesson in both subjects; between Phase 1 and Phase II, the number doubled for EFL and quadrupled for ICT, favorable to student-centered instruction.
- EFL teachers increased group work and pair work considerably, but no improvement was observed among ICT teachers.
 - However, the proportion of time spent on group work (on average 12% of lesson time) remained very low among EFL teachers.
 - Teachers who reported using the TGs for all their lessons tended to spend more lesson time on group work activities across both subjects.
- ICT teachers spent too much time lecturing, but teachers who used the TGs for all their lessons spent relatively less time lecturing.
- The time EFL teachers spent lecturing decreased, but a large proportion of lesson time continued to consist of lectures or whole-class Q&A.
- EFL teachers who used the TGs regularly tended to include more collaborative activities but also spent more time lecturing and asking questions of students.
- EFL teachers who used the TGs for all of their lessons engaged a larger proportion of students when checking for understanding. This was not observed among ICT teachers.
- ICT teachers skipped more activities than EFL teachers.

RECOMMENDATIONS

Develop more project-based lesson plans for ICT taking into consideration the following:

- Develop at least one series of lessons for each grade level where a topic or project runs across a series of lessons. This will guide teachers on how to check-in with students at different stages of a longer project and how to support students working at different speeds or levels.
- Include detailed diverse examples of formative assessments to help teachers use more than one way to check for student understanding in the model daily lessons.

- Provide guidance on how to select activities from among the different resources available in the TGs.
- Provide guidance on monitoring learning:
 - Include diverse and specific formative assessment techniques in training, such as exit cards or traffic lights.
 - Include instructions on how to alter teaching based on the results of formative assessments, including differentiation.
 - Develop and share a framework for developing summative assessment questions, perhaps based on Bloom's Taxonomy.⁴
 - Include more explicit guidance and examples of how to create tasks that can be assessed using the rubrics and criteria provided.
 - Promote peer and self-assessment through the use of the rubrics and criteria.
- Include development of daily lesson plans as part of TPD and communities of practice.

Establish an ICT teacher professional learning community:

- This will support teachers in understanding, using, and going beyond the TGs. A professional learning community has at least two important roles: to develop, support, and continue sharing specific expertise on particular topics and to provide a structure where teachers can access ongoing in-school support.
- Existing methodological teacher support sessions and Telegram channels should be strengthened to continue to develop current teachers' use of the materials and provide support to new and returning teachers as follows:
 - Encourage teachers to develop and share their lesson plans so that teachers have examples and choices and are encouraged to develop their own plans.
 - Support teachers to develop and apply multi-objective and multitopic lessons, especially ones where objectives and topics span several lessons.
 - Support the lesson planning process, including the selection of resources.
 - Promote student-centered and project-based learning approaches for ICT and communication-based learning and oracy for EFL.

Increase ICT lesson time:

 MoPE should ensure students have access to a computer lab with sufficient working computers every week, not every other week.

Support EFL teachers:

- EFL teachers need to embrace the instructional communicative philosophy of the materials more actively; in particular, they need to move away from explicit grammar and translation. Teachers should focus more on oracy (the development of fluent spoken language) in the classroom and provide students with more opportunities to work in pairs or small groups.
- Teachers should use the resources available on the Digital Platform, such as the test generator, and most important they should focus on developing their understanding of using the communicative approach to language learning, developing oracy through

⁴ Anderson, L. W. et al. (Eds.) (2001). A taxonomy for learning, teaching, and assessing: a revision of bloom's taxonomy of educational objectives. Complete edition. Longman.

pair and group work, and using formative assessment to inform teaching, including differentiation.

• Finally, school administrators should encourage teachers to use the TGs rather than create new lesson plans.

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ANNEX A: ICT TG DESCRIPTION

The ICT TGs do not follow the traditional format of a sequence of individual lesson plans across the academic year and are thus described below.

Topic overviews. Topics are arranged by content and are listed at the beginning of the TGs. The topics are mostly presented on a single page (occasionally a double page) with associated learning objectives, resources, and activities therein, along with the number of lessons intended to be used. A graphic at the beginning of the guide demonstrates how two or three topics are intended to be covered in most lessons and how the sequence of topics is intended to proceed across the year.

Outline of lesson groups. Groups of lessons covering linked topics are listed so that teachers can see which objectives for a topic are included along with the recommended resources and activities. This section includes facsimiles of the STBs used.

Model lessons. The TG for each grade level usually ends with five model lessons. These follow a set format and are scripted. These lessons relate to the teaching of a topic or section of a topic and thus may run across several lessons rather than following a traditional 45-minute lesson schedule.

Resources. Resources including the scope and sequence, national standards, and generic assessment rubrics are included along with other resources such as teacher presentations in the final section of the TGs.

Table A-1. Essential Guidance for New or Revised Teacher's Guides (TGs)

	Content and Instruction
Instructional method	Use a consistent instructional method. The TG should be consistent throughout all lessons to create routine and structure for teachers and students. This should be derived from a carefully designed scope and sequence.
Lesson plans	Include daily lesson plans. Develop one lesson (with appropriate number of activities) for each day. The number and type of activities will vary by grade and context and should cover the critical skills but be limited by the amount of instructional time available.
Scripting	Use heavier scripting in the beginning of the guide and reduce to lighter scripting. Use full scripting in the beginning lessons of the TG and reduce to lighter scripting later in the guide.
Number of activities	Limit the number of activities per lesson. The number of activities within a lesson should consider the amount of instructional time available and make sure that all critical activities can actually be done during the classroom instructional time. No more than five to seven activities should be done within a 30- to 45-minute lesson period. Time should be allocated for transitions between activities as needed.
Monitoring learning	Embed in each lesson checks for understanding and other types of informal assessment. Different strategies for teachers to monitor student learning should be included within the structure of the lesson.
Differentiating instruction	Include guidance on differentiated instruction. Support to teachers for noticing and responding to student needs should be included slowly and deliberately over the course of a project. For example, in Year 1, the focus may be on noticing that students respond differently. In Year 2, the TG may then provide suggestions or examples on extension activities for the particular needs of higher and lower performing students.
	Design/Formatting
Length	Limit the length of each lesson. Ideally, each 30- to 45-minute lesson should only be one page long, with initial lessons in the TG potentially two pages long to accommodate more detailed guidance to the teacher. The TG should use succinct language. Ensure that the font is legible.
Goals/objectiv es	List goals/objectives for each lesson. Clearly identify the theme, goals, and objectives of each lesson for teachers such that they are clear on the overarching aim for the various activities contained within the day's lesson. In addition, list any resources or materials that are needed to aid the teacher in teaching the lesson.
Physical features	The guide should be lightweight with appropriate binding. The guide should not be too heavy for teachers to use and have strong binding (polyurethane reactive or thread-sewn) that allows it to be frequently opened.
Teacher creativity	Provide hints for teacher creativity. Use text boxes that provide tips that will aid teachers in creating new activities or add to existing activities in creative ways to allow teachers to use their skills and ideas to go beyond structured guidance. This can be to provide additional support or extension activities.
Strategic "why"	Strategically embed the "why" of the activity. This may include providing a basic explanation of the reason for some activities chosen and can be included either in the lesson plan or in the front matter. If included in the lesson plan, tips should be short and embedded where space if available or extra explanation is needed. For example, a lesson may have a tip for choosing extra practice opportunities.
Pacing	Provide suggested activity pacing for the activities in a lesson, using a range of minutes. List suggested pacing for each activity within the lesson using a range of minutes (e.g., 4–7 minutes rather than 5 minutes). Ensure that all activities can be completed within the pacing suggested considering transition time between activities.

⁵Piper et al. (2018).

Provide guidance on inclusion. The guide should contain information to support teachers on how to be inclusive of students with special needs.
Reduce front and back matter to absolute basics. Keep the introduction/conclusion to a minimum, given that they are infrequently used and add to the bulkiness of the guide.
Limit the number of icons. The TG should use icons to guide teachers. However, these should be limited in number, used in a consistent manner, and explained in the introductory pages.
Ensure that the language used in the guide matches the language of instruction. The headings, scripts, instructions to teachers, and front matter should be written to match the language of the content being taught.
Use consistent formatting. Be deliberate and consistent with formatting decisions. New lessons should start at the top of a new page so they are easily identifiable.
Compile all the necessary information for a lesson in a single place/on the same page. To maximize ease of use, TGs should be designed to not separate the script/instructions from the relevant content. Specifically, a teacher should not have to turn to various sections of the guide to find the content or instructions needed to teach the lesson.

Table C-1. Classroom Observation and Interview Tool

Prompt	Туре	Options
Highest education level of the teacher	single	1 "teacher training," 2 "bachelor's degree," 3 "master's degree," 4 "doctorate"
How many training sessions have you attended?	number	
How do you plan your lessons?	single	0 "There is no need for lesson plans so I don't use them," 1 "I write my own lesson plans without support from the materials," 2 "I use the TG to support my planning but write my own lesson plans," 3 "I only use the lesson plans in the TG—all the plans I need are there."
Did you use the new TG when you planned for this particular lesson?	single	0 "yes," 1 "no"
Which lesson in the TG are you teaching today?	text	
Is this lesson part of a multi-lesson unit that spans several classes?	single	0 "yes," 1 "no"
What grade is the class that will be observed?	single	1 "grade 1," 2 "grade 2," 3 "grade 3," 4 "grade 4," 5 "grade 5," 6 "grade 6," 7 "grade 7," 8 "grade 8," "grade 9," 10 "grade 10," 11 "grade 11"
How many TOTAL STUDENTS are there in the class that will be observed?	number	
How many BOYS are there in the class that will be observed?	number	
How many GIRLS are there in the class that will be observed?	number	
Does the teacher start the lesson with checking homework (and/or recitation)?	single	1 "yes, 2 "no"
If so, how many minutes did the teacher spend checking homework (and/or recitation)?	number	
Does the teacher state the following at the start of the lesson?	single	1 "lesson objectives," 2 "lesson topic," 3 "both lesson objectives and topics," 4 "none"
How many lesson objectives does the teacher give for the lesson?	single	1 "one," 2 "two," 3 "three," 4 "four," 5 "five"
Does the teacher connect lesson objective(s) and/or lesson topic to a real-world context?	single	1 "yes," 2 "no"
Section below is repeated for each acti	vity teacher co	nducted during the lesson
Does the teacher explain how the activity helps meet the learning objective?	single	0 "yes," 1 "no"
Who are the students working with?	single	1 "by themselves," 4 "with a partner," 7 "in a group," 12 "N/A students only being asked to listen,"13 "N/A students only being asked to answer as a whole-class activity," 777 "other"
If other please input here	text	

Table C-1. Classroom Observation and Interview Tool

Prompt	Туре	Options
What is the focus skill?	multiple	1 "listening," 2 "writing," 3 "reading," 4 "speaking," 5 "grammar," 6 "translation," 7 "vocabulary," 777 "other"
Please input what other strategies does the teacher use?	text	
What strategies does the teacher use?	multiple	1 "3-2-1 strategy," 2 "3-minute pause," 3 "brainstorming," 4 "gallery walk," 5 "group work," 6 "pair work," 7 "share out," 8 "think-pair-share," 777 "other"
Please input what other strategies does the teacher use?	text	
Who is talking?	multiple	1 "teacher lecturing whole class," 2" 2individual student answering teacher's question to the whole class," 3 "teacher to individual student (whole class listening)," 4 "student to whole class (presenting)," 5 "student to student (pairs)," 6 "student to student (groups)," 7 "no talking—independent work"
Who is answering the teacher's questions?	multiple	1 "the whole class at once," 2 "few students," 3 "all or most students," 4 "not applicable," 777 "other"
If other, please specify?	text	
What type of questions is the teacher asking?	single	1 "right/wrong answer," 2 "open-ended question that leads to discussion," 3 "combination of both," 4 "not applicable"
Are the students being asked to analyze or explain why?	single	1 "yes," 2 "no"
Does the teacher share their assessment criteria at the beginning of the activity?	single	1 "yes," 2 "no," 3 "not applicable"
What type(s) of feedback does the teacher provide?	multiple	1 "talks with each student as they are working," 2 "looks at students' work while they are working," 4 "marks their work," 5 "positive or negative encouragement," 6 "no feedback," 777 "other"
Please input what other type of feedback does the teacher provide?	text	
How often does the teacher check for understanding?	single	1 "once," 2 "more than once in the same way each time," 3 "more than once in different ways," 4 "not at all," 5 "not applicable"
Who checks for understanding?	single	1 "teacher," 2 "students check themselves," 3 "students check peers," 4 "no checking for understanding," 777 "other"
If other, please specify who checks for understanding?	text	
Approximately how long did the activity last (minutes)?	number	
End of repeated section		
Check if it is the end of the lesson and there are no more activities to add.	single	
Did you add any content, activity to the lesson? If so, what?	text	
Did you skip part(s) of an activity? If so, why?	text	

Table C-1. Classroom Observation and Interview Tool

Prompt	Туре	Options
Did you skip an entire activity from the lesson? If so, why?	text	
How effectively are you able to develop daily lesson plans from the information given in the new TG?	text	
How easy/difficult is it to plan and manage lessons with multiple goals, objectives, and standards? Why?	text	
What supplementary materials did you use during the lesson?	text	
Did you teach the entire lesson as outlined in the TG?	single	1 "yes," 2 "no"