

TERMS OF REFERENCE

Contract:	ICS-12 (Lump sum)		
Project:	Kyrgyz Republic: School Education Reform Sector Development Project (Loan No. 4217-KGZ (COL) / Grant No. 0851-KGZ) (SESDP)		
Position:	Expert on Developing Educational Materials and Conducting Training for IT Quantoriums		
Source:	National	Category:	Independent Individual Consultant

I. General Information

The Ministry of Education of the Kyrgyz Republic is implementing the School Education Reform Sector Development Project, funded by the Asian Development Bank (ADB). The project aims to develop students' engineering and technical knowledge, practical skills, and innovative competencies, including the development of school STEM labs and Quantoriums. The project involves the creation and equipping of STEM labs and Quantoriums in innovative schools with educational equipment for programming, robotics, electronics, Raspberry Pi, 3D printing, educational drones, and other practice-oriented areas that promote the implementation of specialized education. To train teachers, a unified curriculum and a set of instructional materials are required, as well as the training of seven regional consultants to provide methodological support to schools.

II. Objective of the Assignment

The objective of this assignment is to develop, based on the list of equipment provided by the PIU, a unified practice-oriented curriculum and a complete set of instructional materials on the practical use of educational equipment and the software and hardware of STEM platforms and school Quantoriums, as well as to conduct a Training of Trainers (ToT) for 7 regional consultants, who will subsequently train teachers in schools.

III. Scope of Work

The consultant will perform the following tasks:

1. Based on the list of equipment provided by the PIU, develop a training program on the practical use of educational equipment and the software and hardware of STEM platforms and school Quantoriums. The program must include training modules, lesson topics and content, learning objectives and expected outcomes, practical assignments and project work, the equipment and software to be used, the duration of sessions, and tools for assessing learning outcomes.
2. Based on the training program approved by the PIU, develop a complete set of instructional materials for conducting training, including a trainer's manual, materials for trainees, presentations, practical assignments and project work, instructions for using equipment and software, teaching aids, and tools for assessing learning outcomes.
3. Conducts Training of Trainers (ToT) for 7 regional consultants according to the approved program, including hands-on use of equipment and software at STEM centers and Quantoriums, to prepare them to independently conduct training for educators. The duration of the ToT is determined by the approved program; up to 15 working days of practical training are allocated for planning purposes.
4. Ensures that each session conducted as part of the training for the 7 regional consultants is video-recorded. The video materials are organized in accordance with the training program and submitted to the PIU. After the ToT is completed, the consultant provides remote advisory support to the responsible PIU staff and regional consultants for a period of 4 months on the application of the developed curriculum and instructional materials, including explanations regarding session content, practical assignments, and the use of the equipment and software specified in the curriculum. Upon completion of the support period, the consultant submits a summary of the questions received and the clarifications provided, along with the final version of the curriculum, instructional materials, and the final report.

IV. Review, Approval, and Reporting Procedures

The consultant works under the general supervision of the PIU Project Manager and reports to the PIU IT Specialist.

The Project Manager provides overall guidance, verifies the achievement of agreed-upon deliverables, and gives final approval of the deliverables for payment.

The PIU IT Specialist handles day-to-day technical coordination, verifies that the deliverables are complete, ensures that the developed materials comply with the provided equipment list and the technical specifications, confirms the presence of the required practical assignments, materials, and video recordings, and provides technical feedback.

The developed program and instructional materials are submitted to the PIU for review and approval. If necessary, the PIU has the right to forward the submitted materials to specialists in the relevant field for expert review. The consultant is required to address the comments agreed upon by the PIU prior to the final approval of the relevant deliverable.

Training for the seven regional consultants takes place after the PIU approves the training program and the instructional materials package.

V. Results, Reporting Requirements, and Payment Schedule

The contract is performed on a lump-sum basis. All deliverables specified in the contract are accepted by the PIU's IT specialist and approved by the Manager. The PIU may request monthly progress reports, but these do not constitute separate deliverables subject to payment.

Deliverables	Deadline	% of Contract Amount	
Deliverable 1: An approved training program, including modules, topics, and sessions; objectives and expected outcomes; practical assignments and projects; equipment and software to be used; session duration; and assessment tools.	Within 20 calendar days from the contract start date	20%	
Deliverable 2: A complete training and instructional package based on the approved curriculum: a trainer's manual, materials for trainees, presentations, practical and project assignments, instructions for equipment and software, and teaching and assessment materials. The materials must be reviewed and approved by the PIU before the start of the ToT.	By the end of the second month from the contract start date	40%	
Deliverable 3: Conduct a ToT for 7 regional consultants based on the approved curriculum, including hands-on use of equipment and software. Submit the program/schedule of the training actually conducted, confirmation of participation by the 7 consultants, and a set of the materials used.	By the end of the third month from the contract start date	30%	
Deliverable 4: A final set of materials and a final report, including the final version of the program and training materials with agreed-upon comments addressed, a complete, organized set of ToT video recordings, a summary of consulting support provided, questions received, and clarifications provided, as well as recommendations for the further use of the program and materials	Upon completion of the 4-month consulting support period (approximately by the end of the 7th month from the contract start date)	10%	

The training program and instructional materials for training educators must be provided in Russian and Kyrgyz. Reports and other working and supporting materials shall be submitted in Russian and/or Kyrgyz in accordance with the requirements of the PIU. Electronic materials shall be provided in accessible formats; editable source files shall be provided along with the final versions. A separate video recording must be provided for each session conducted as part of the ToT. Video recordings must be organized by module and session, be openable and playable using standard software, and the image and sound quality must be sufficient to convey the session's content and practical demonstrations.

If there are any comments, the consultant revises the relevant deliverable and resubmits it to the PIU. Payment is made only after the relevant deliverable has been accepted in accordance with the procedures established by the project and the contract.

VI. Qualification Requirements

- A university's degree in computer science, programming, engineering, robotics, STEM education, pedagogy in the relevant field, or another relevant area. A master's degree is preferred;
- At least 5 years of documented experience in developing educational programs, instructional materials, and/or conducting training in robotics, programming, 3D modeling, STEM, or related fields;
- Practical experience in developing and conducting training sessions, workshops, or Training of Trainers (ToT) programs, including hands-on and project-based activities;
- Experience developing instructional, methodological, practical, and assessment materials for educators and/or learners;
- Practical experience using equipment, software, and digital solutions employed in STEM labs, robotics classrooms, or Quantoriums;
- Knowledge of modern approaches to STEM education, robotics, programming, digital technologies, and project-based learning;
- Fluency in Russian and/or Kyrgyz; knowledge of English is a plus. The consultant must be proficient in using the digital tools necessary for preparing instructional materials, conducting training, and preparing reports.

VII. Duration of the Assignment

The total duration of the assignment is up to 7 person-months from the contract start date, including program and materials development, delivery of the ToT, and a 4-month period of remote consulting support following the completion of the ToT. Specific start and end dates for the services will be specified in the contract after the consultant selection process is completed.

Place of Execution:	Duration:	Dates:
Duty station is in PIU, located at the address: Bishkek, Manas Ave. 22A.	12 months, with the possibility of extension.	Contract Commences _____, subject to ADB approval. Contract Validity _____.
Contract period:	-----	-----